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YOUR SILENT REPRESENTATIVE IN THE CUSTOMER'S HOME

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In Two Sections
Part I

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the repair is permanent!

THE NATIONAL SUPPLY COMPANY

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TOLEDO, OHIO, U. S. A.

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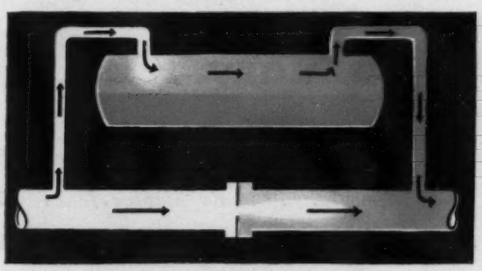
DOUBLE-CHECKED SAFETY . .

WHEN YOU *Pentalarm Your Pipelines*



PENTALARM—the warning odor for fuel gases—is a double-checked odorant: FIRST, in the laboratory for uniform quality; SECOND, in the field for actual performance.

LOW-COST EQUIPMENT

PENTALARM is normally introduced in by-pass odorizers. These can be made up in your own plant from materials on hand, or can be purchased ready-made. Occasional checking and refilling is all that is required in the operation of by-pass equipment recommended by Sharples for use with PENTALARM.

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GAS

Fifteenth Year of Publication

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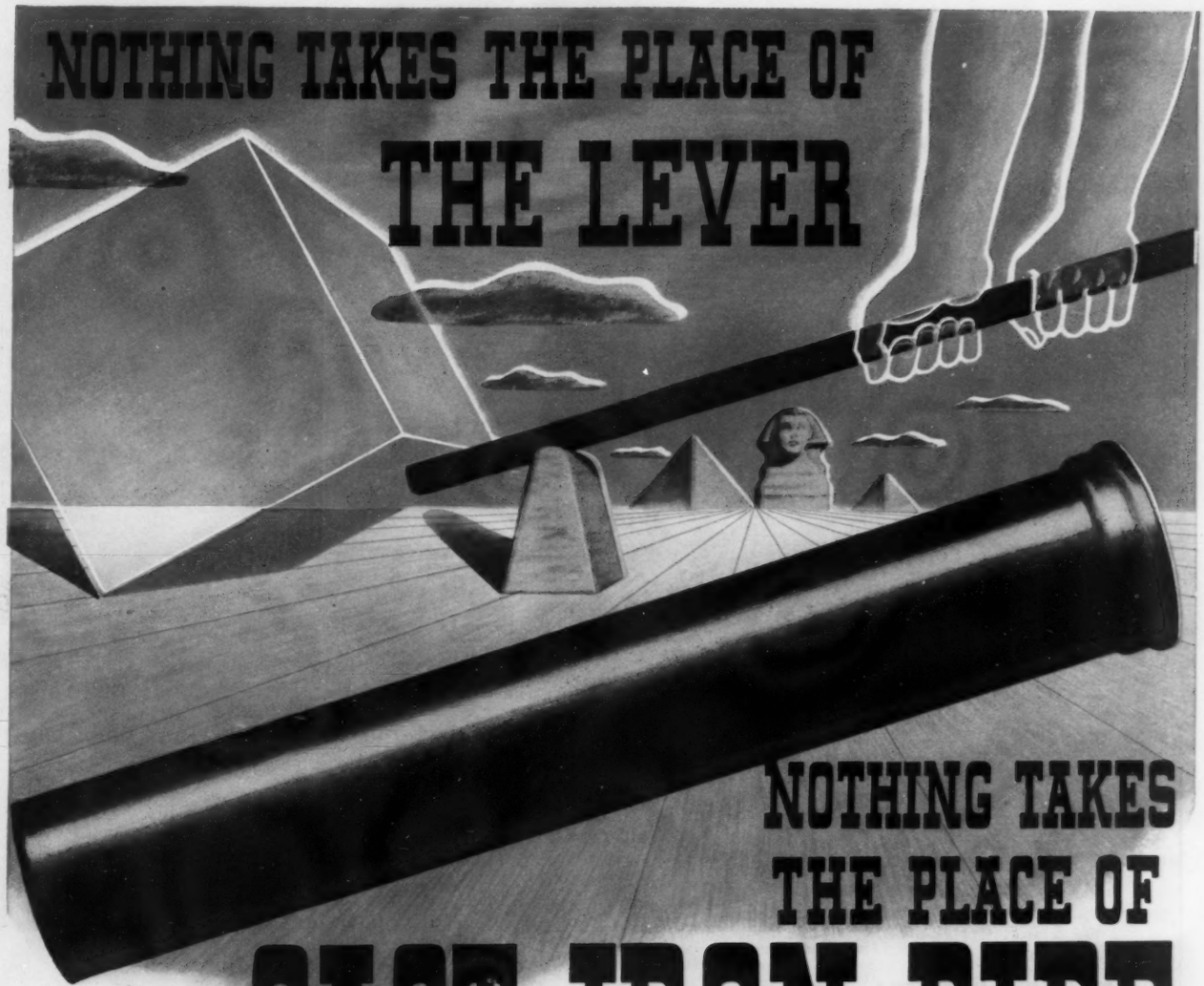


NOTHING TAKES THE PLACE OF CAST IRON PIPE

THE LEVER and fulcrum as an engineering principle—cast iron pipe as a long-lived material for underground mains—nothing has taken their place for centuries. Yet both have been highly developed in design and efficiency.

If you demand *proved* long life and low maintenance cost that result from effective resistance to corrosion—assured safety margins for impact, beam load and crushing stresses—and permanently tight joints—then you will agree that *nothing takes the place of cast iron pipe.* Some materials meet some of these requirements but only cast iron pipe meets them all.

CAST Q IRON

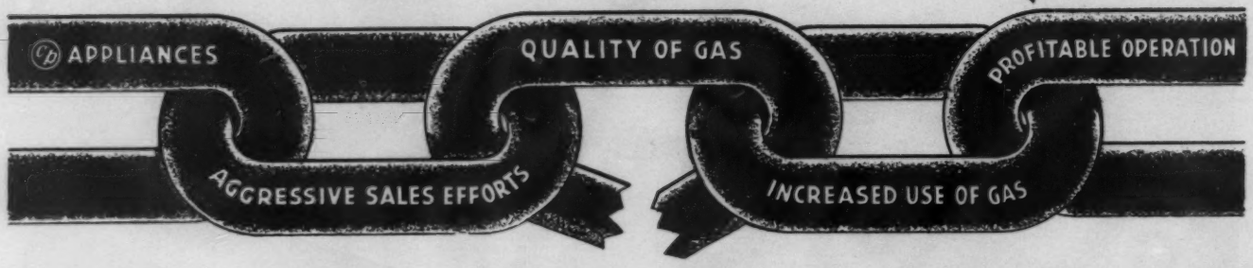
Look for the "Q-Check" registered trade mark.
Cast iron pipe is made in diameters from 1¼ to 84 inches.

THE STANDARD MATERIAL FOR UNDERGROUND MAINS

Replacing another material which failed in 6 years, Port Arthur, Texas, installs a cast iron gas main equipped with bottle-tight mechanical joints. Cast iron gas mains, as old as the gas industry itself, are in service today.

THE CAST IRON PIPE RESEARCH ASSOCIATION, THOMAS F. WOLFE, RESEARCH ENGINEER, 1013 PEOPLES GAS BUILDING, CHICAGO, ILLINOIS

IS THERE A WEAK LINK



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Certified Performance equipment is only the first link in the chain that leads to more profitable operation. Don't let a weak link break the chain!

Certified Performance appliances demand clean gas. It's *your* job to see that the gas you manufacture permits C. P. appliances to operate as they should. That means dependable gas manufacturing equipment, with *adequate* cleaning facilities.

So look to your gas manufacturing equipment—it may be the weakest link in an otherwise strong chain...We'll be glad to give you complete information on any of the apparatus Semet-Solvay has developed for cleaning gas.

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Remove Tar

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Remove 90% of remaining Tar

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and

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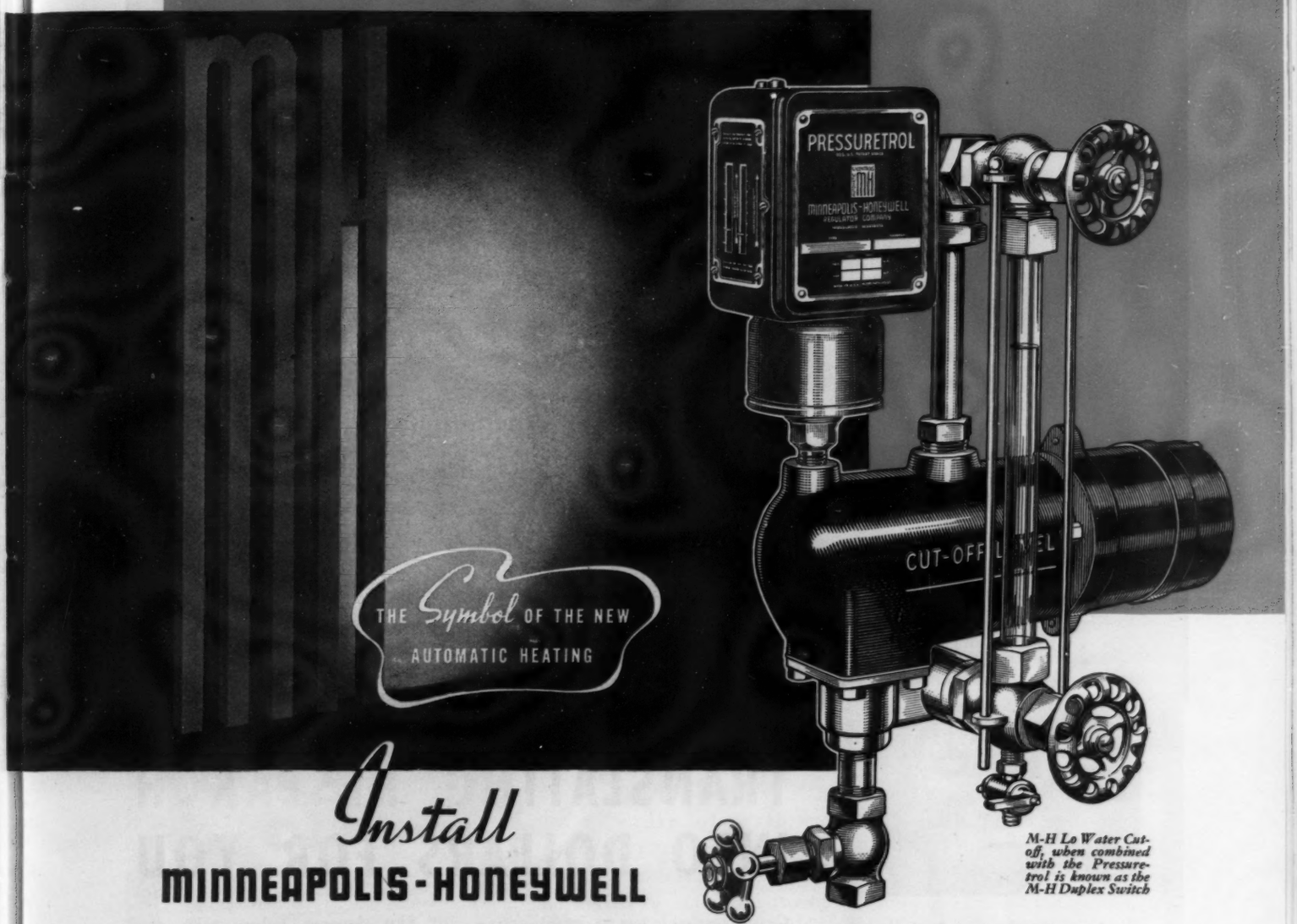

THE *Symbol* OF THE NEW AUTOMATIC HEATING

M-H Lo Water Cut-off, when combined with the Pressuretrol is known as the M-H Duplex Switch

Install MINNEAPOLIS-HONEYWELL

BOILER SAFETY

IT IS a comfortable feeling to know that your customer has the last word in boiler safety. You can rest easy after you have recommended the M-H Low Water Cutoff. It is a sturdy control, backed by the fifty years' engineering experience of Minneapolis-Honeywell. The M-H Low Water Cutoff is approved by the National Bureau of Boiler Pressure Vessel Inspectors and the Boiler & Machinery Division of the National Bureau of Casualty and Surety Underwriters. It is designed in accordance with the A. S. M. E. Boiler Code . . . . .

The Minneapolis-Honeywell Low Water Cutoff is quickly installed . . . Fits standard half-inch gauge glass openings. Lower fitting may be readily removed and its position reversed to simplify mounting and location of entire unit.

In addition to its special features and easy installation, it is priced very low, assuring a good profit to the installer. It is better to be safe than sorry. Install the M-H Low Water Cutoff. Minneapolis-Honeywell Regulator Company, 2946 Fourth Avenue South, Minneapolis, Minn.

MINNEAPOLIS-HONEYWELL *Lo Water Cutoff*

300,000 OPERATIONS

AND STILL IN GOOD WORKING CONDITION

This veteran served five years on a heat recovery line, being partially opened and closed every four minutes seven hours a day for five years—exceptional service even from a valve of exceptional quality. A tribute to the practical applications of Crane research.

". . to unearth new facts"

Recently, the newly completed Crane Research Laboratories, housing the largest and best equipped research facilities in the industry, were opened to public view. In the foreword of a booklet published on this occasion, President Charles B. Nolte says:

"Research is misunderstood by a great many people, but in its simplest form it may be defined as an organized and diligent application of existing knowledge to unearth new facts. . . . Crane Co., therefore, is dedicated to the philosophy that only through continuing a well-organized program of research can it best serve its employees, its stockholders, the users of its products, and society in general."

TRANSLATING RESEARCH INTO DOLLARS FOR YOU

Crane research has as its objective the saving of dollars in your plant operation—the improvement of those valves and fittings whose responsibility it is to control all phases of flow.

Research in design and in new alloys has resulted in multiplying the life of valve stems—this improvement translated into longer life means dollars for you. Valve seats have greater resistance to erosion and corrosion because of research—and again research cuts your costs—saves you money.

Alloys have been developed capable of withstanding the searing cold of 150 degrees below zero—the scorching heat of 1300 degrees above, opening up new fields for you in the handling of liquids or gases at greater ranges in temperature. And in welding new alloys, Crane research has developed new techniques that make their use practical. Again this means increased production—more dollars in profit for you.

But research does not stop with these spectacular achievements . . . it also provides an accurate control of manufacture that guarantees the uniform, high quality of the valves and fittings you buy from Crane.

CRANE

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PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES AND WHOLESALERS IN ALL MARKETS

Raging Flood NO MATCH FOR NATIONAL SEAMLESS

Pipe line crossing over the Santa Clara River, as it appeared after the California flood of 1938. Rehabilitation work had not yet been started. Only one pipe—the painted line of NATIONAL Seamless—withstood the terrific pummeling of the flood.

Here's one pipe you can rely on when the "unexpected" happens

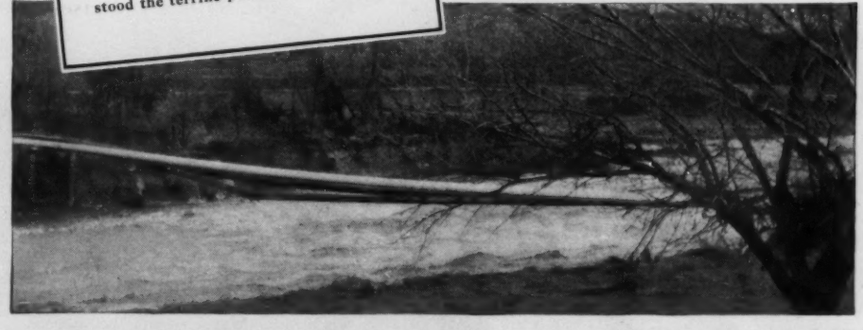
CALIFORNIA'S flood of last spring furnishes another dramatic demonstration of the strength and stamina of NATIONAL Seamless Pipe. Four pipe lines, three gas and one petroleum, crossed the Santa Clara River here. One of these was a 16-inch O.D. gas line from the San Joaquin Valley Field. This particular line was of NATIONAL Seamless Pipe.

On the day before the flood struck, all four lines were operating satisfactorily, and there was no reason to anticipate trouble. Then the rains came, the waters rose, and without warning, California found itself in the grip of the worst flood in its history. The little Santa Clara River, usually dry, quickly turned into a raging torrent. Ripped out bridges, destroyed walls and trestles. One by one, three of the pipe lines yielded to the swollen stream.

Later, when the waters subsided, and rehabilitating crews worked their way into the flood-torn area, they made what to them seemed a remarkable discovery. Here, where the four pipe lines had crossed the Santa Clara, three were bent and twisted.

The fourth, of NATIONAL Seamless Pipe, remained intact—just as straight and erect as the day it was installed. Close inspection showed that no repairs to the pipe line itself were necessary.

Here again NATIONAL Seamless, "Walls Without Welds," proves that it has the reserve strength you need when the "unexpected" happens. Write for complete data.



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THE COOLING TOWER COMPANY, INC.

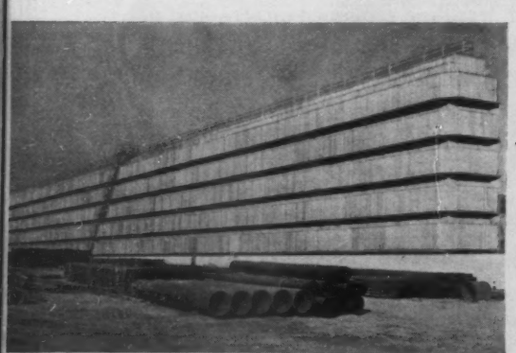
pioneers and leaders in the design and manufacture of

FORCED DRAFT COOLING TOWERS

and all other types of water cooling equipment

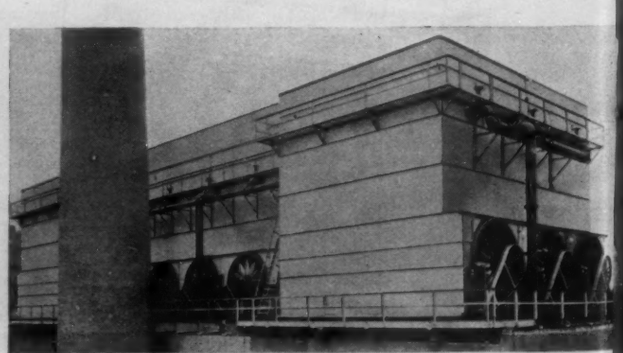
For 20 years, The Fluor Corporation, Ltd., has been designing and building atmospheric cooling towers to meet satisfactorily the requirements of this particular field. Since 1911, The Cooling Tower Company has taken the lead in forced draft cooling tower development and fabrication.

Now, under one banner, with a unity of purpose which has established both companies as leaders in cooling tower engineering and construction, will be combined patents, experience and personnel. We believe that the strength of this unification will be apparent to the industry in the shape of an unsurpassed cooling tower service.



This 780 ft., 15 deck aerator type cooling tower, is the largest of its kind. Built by The Fluor Corp., Ltd.

The design and construction of the Fluor Aerator Type Cooling Tower has been governed generally by the condition of full cooling efficiency under all weather and operating conditions and specifically by positive elimination of wind-blown spray, measurable reduction of water make-up requirements due to wind losses, and the utilization of minimum ground space and the savings and economies attendant to these factors.



The largest all-steel forced draft cooling tower ever built. Built by The Cooling Tower Company, Inc.

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We design, manufacture and erect mechanical draft cooling towers of the induced or forced draft type, in all capacities. Forced draft towers are particularly suitable for refineries, large industrial plants, public utilities, and all types of air conditioning installations. Our mechanical draft towers have a wood or steel shell, drift eliminators, and high efficiency fans and motors. For exceptionally quiet operation-we can supply blower type fans.

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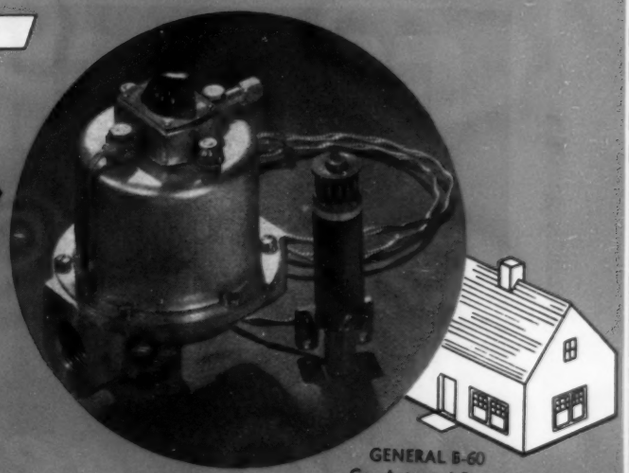
RIGHT

Automatic Control

for every

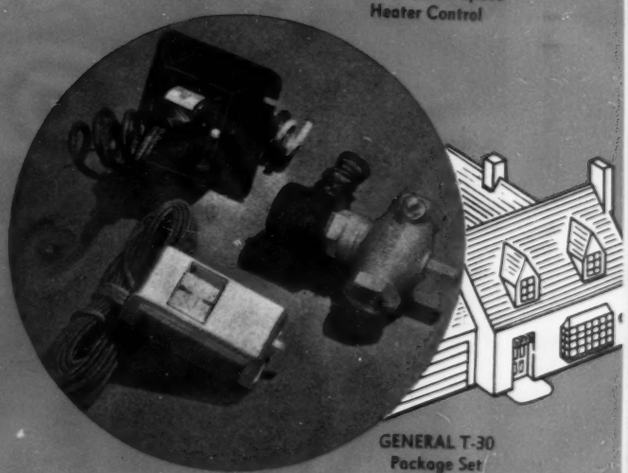
AUTOMATIC GAS HEATING JOB



GENERAL B-60
Gas-Actuated Space
Heater Control

★ FOR SMALL HOMES

On space heaters and floor furnaces the General B-60 Series Controls offer fully automatic room temperature control and safety pilot control. Entirely gas-actuated, no electricity is needed (an efficient pilot burner generator supplies all the current needed to operate the valve). Total differential of thermostat is one half degree F. Absolute quiet operation. First cost is low; the control can be installed by gas fitter.



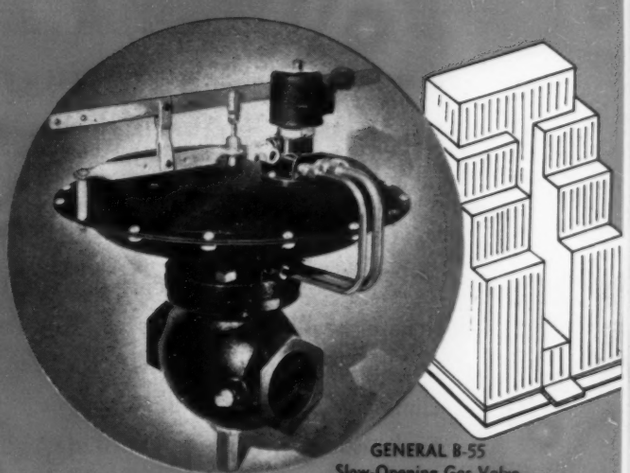
GENERAL T-30
Package Set

★ FOR MODERATE HOMES

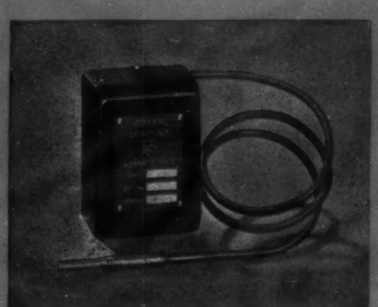
For basement furnace control several combinations of General Controls are available. A control set much in demand by heating engineers is the GENERAL T-30, illustrated at the right, consisting of the silent A. C. type K-3B 2-wire gas valve, Transformer, and fast-acting and accurate Metrotherm Room Thermostat. Ideally adaptable to gas boilers, conversion burners, hot air furnaces.

★ FOR LARGE HOMES AND COMMERCIAL BUILDINGS

The General B-55 Slow-opening Gas Valve is made in a wide range of sizes to control domestic furnaces and conversion burners or for large gas-fired boilers. The B-55 Series are electrically operated, 2-wire current failure valves having adjustable opening speed, a desirable feature where conditions of variable ignition, combustion and pressure exist. The B-55 controls gas flow and damper opening simultaneously.

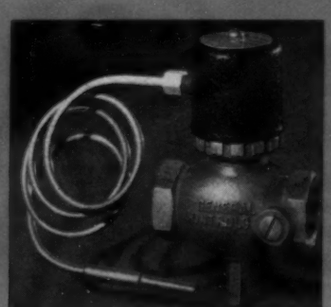


GENERAL B-55
Slow-Opening Gas Valve



THERMOPILOT A-100

Applying flame to thermocouple tip makes electric contact, allowing main gas valve to open. Pilot light failure opens circuit. Automatically resets when pilot is relighted.



THERMOVALVE MR-2

Utilizes same pilot flame failure principle as Thermopilot,—but permits a manually reset valve to shut off gas flow instead of opening the electric current.

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A new catalog has just been issued illustrating the complete line of General Controls for the gas industry—giving complete engineering data and wiring diagrams. Write for your copy to General Controls, 450 East Ohio Street, Chicago, Illinois.

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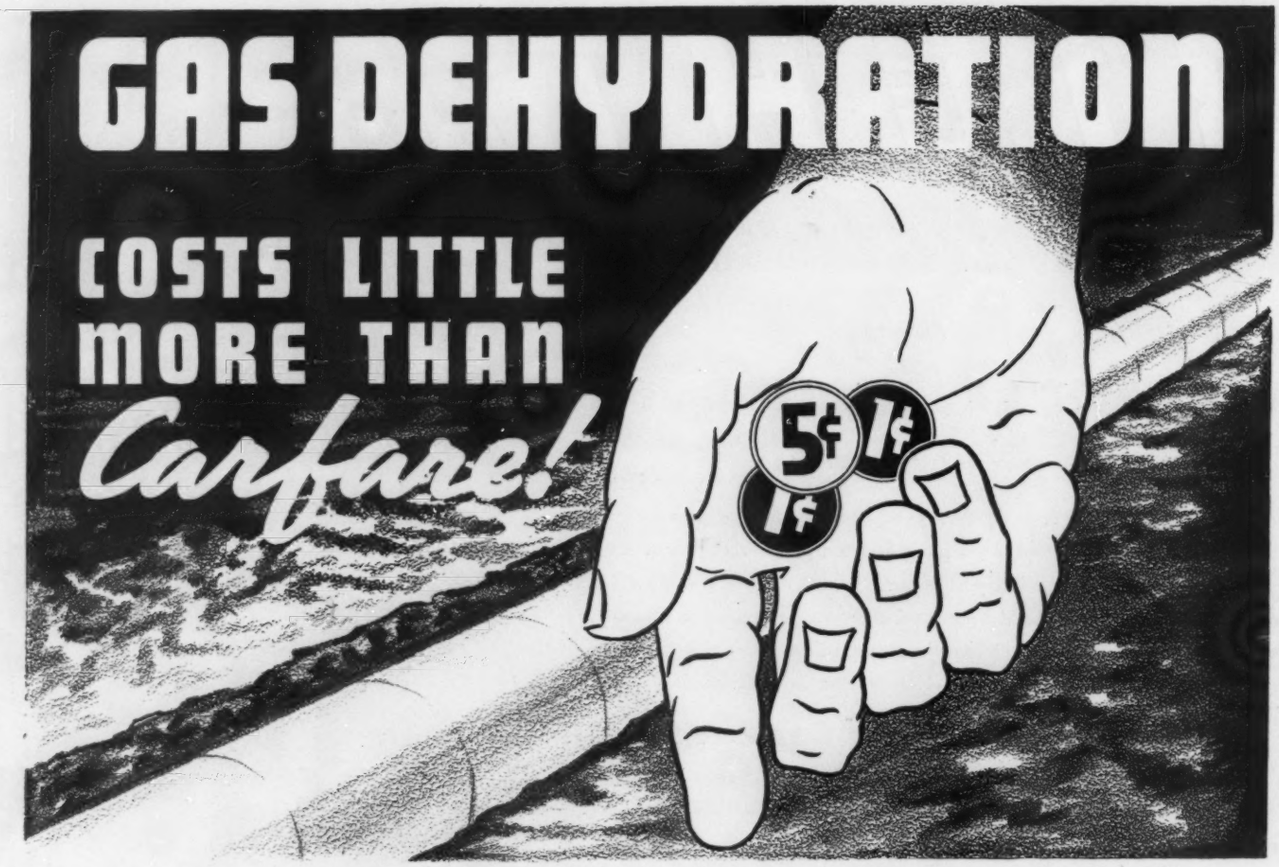

A fraction over 7c . . . or little more than street car fare in most American cities, and even less than the fare in some...is all it costs a gas company client of The Stearns-Roger Manufacturing Company and Parkhill-Wade to dehydrate one million cubic feet of natural gas!

At this low operating cost, our client reports that former line freeze-ups and low line transmission efficiency problems have been entirely eliminated. In addition, this single de hydration plant stands guard, day and night, over a pipe line investment totaling hundreds of thousands of dollars by completely protecting it from internal deterioration formerly caused by condensate and hydrate formation! Thus, as an added benefit, years of life have been added to this 1,000 mile pipe line.

With seasonal peak load conditions demanding full capacity and maximum efficiency from *your* pipe line, now is the time to plan protection against low transmission problems, as well as maintenance worries and expense next winter, and for all winters to come. Accept this offer ...our staff is prepared to place at your disposal the full of an experience gained from engineering, designing and erecting the majority of chemical dehydration plants in the United States. A request for data on your letterhead will bring prompt response.

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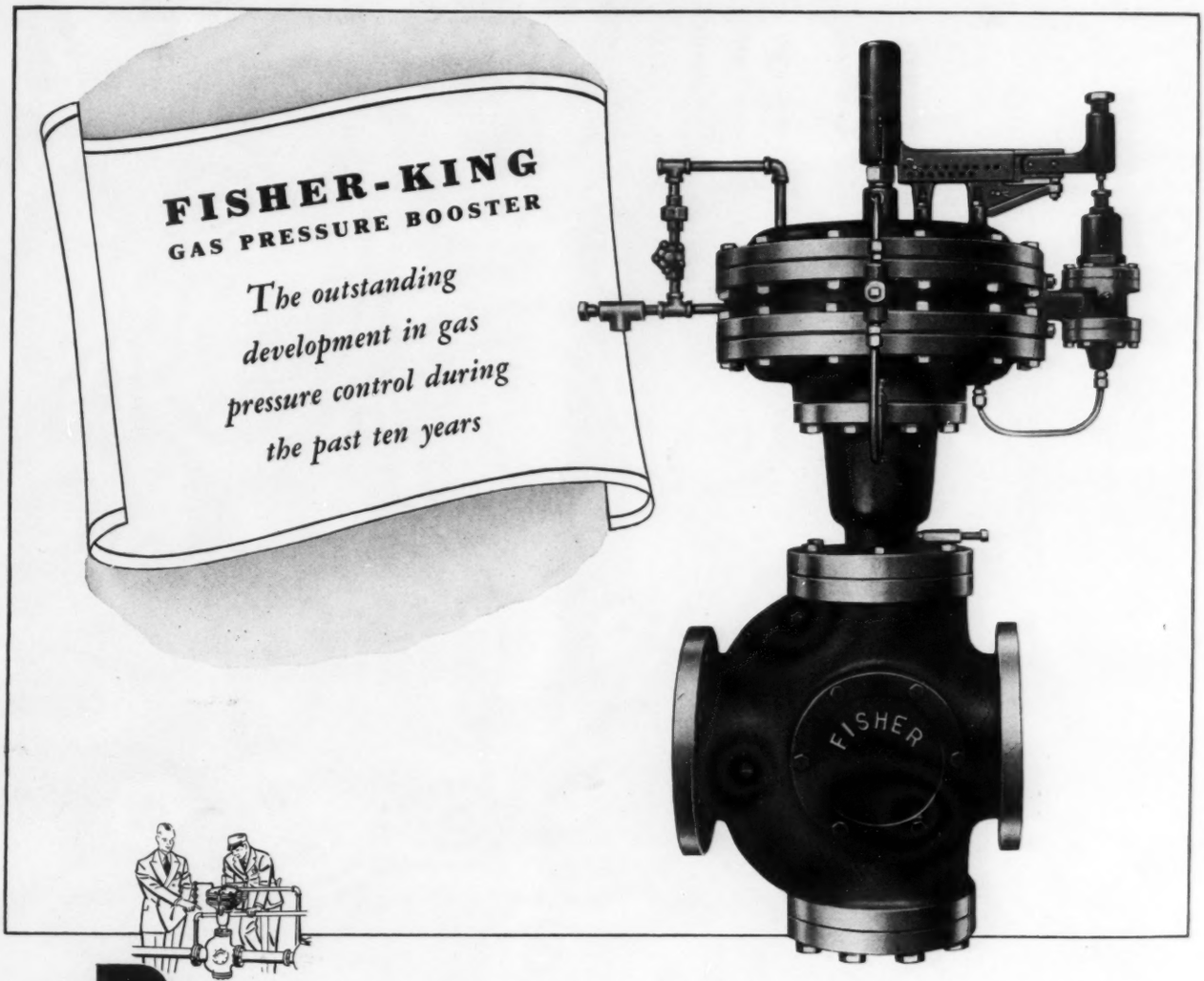
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GAS PRESSURE BOOSTER
The outstanding development in gas pressure control during the past ten years
FISHER

REDUCES GAS LEAKAGE 25 TO 50%

FISHER-KING Gas Pressure Booster does these 3 things for you:

1 *Enables system pressure to be lowered 25% to 50% with corresponding reductions in "unaccounted for" gas.*

2 *Eliminates countless man hours, truck hours, and mileage now devoted to adjusting lever and weight regulators manually.*

3 *Reduces consumer complaints and improves good will because pressures are better regulated according to demand.*

The FISHER-KING Gas Pressure Booster automatically maintains a constant pressure at the low pressure point in the distribution system! This amazing device is readily mounted on regulators you now have in service.

Thoroughly Tested in the Field

While this is the first time the FISHER-KING Gas Booster has been offered to the industry, it has been under actual field development and test since 1932. There are now 197 Boosters operating on all types of gas distribution systems throughout the U. S.

Pays for Itself in 30 to 60 Days

In 187 out of the present 197 FISHER-KING Gas Booster installations, this control has actually paid for itself in 30 to 60 days simply by the savings it effected in "unaccounted for" gas.

Call in a FISHER Sales Engineer today—or, write for new FREE Book that tells how FISHER-KING Boosters can reduce gas leakage as much as 50%.

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Contains exhibits of actual Flow Charts before and after Booster was installed in various systems throughout U. S. Interesting colored diagrams show Booster construction and operation. Write for your FREE copy.

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PIPE

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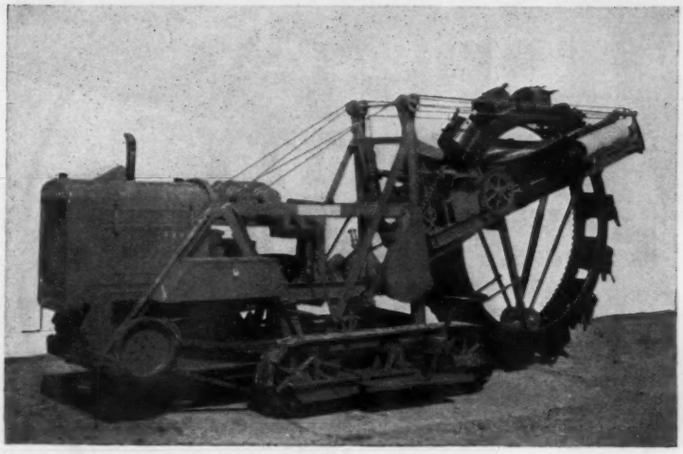
Plants and Sales Offices throughout the United States.

GO AHEAD



in 1939

with Modern Distribution Equipment

Dig Anywhere . . . Anytime with "CLEVELANDS"

Digging through stone block pavement, without preliminary work.

• Why struggle along with obsolete methods—obsolete equipment? Why be satisfied with sluggish, undependable methods—methods that cost more, take more time and cause more trouble?

Why put up with this, when you can eliminate them so easily—with modern, up-to-date equipment to dig and fill your trenches.

Here is equipment that meets exactly the requirements of the Gas Distribution executive. Because it is compact, streamlined for light weight and performance. Because it is rugged and dependable and because it is supreme in quality of construction, it is the kind of equipment you need to get the pipe in the ground *quickly* and at *lowest cost.*

Hair-trigger, truck and trailer mobility makes these savings available on more jobs—anywhere in your system. Why not go ahead in 1939 with "Clevelands"? Details gladly furnished.

THE CLEVELAND TRENCHER CO.

20100 St. Clair Avenue • Cleveland, Ohio

One important "Cleveland" idea that adds to the versatility of performance is illustrated at the right—low cost transportation, at truck speed, via special trailer—"Clevelands" load or unload in 10 to 15 minutes.

CLEVELANDS

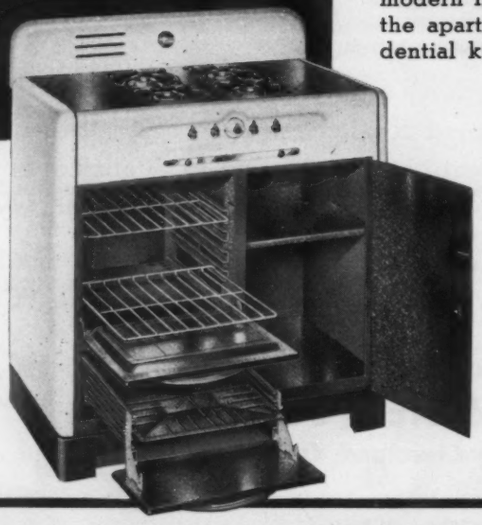
MANHATTAN UNIVERSAL for 1939

Presents

QUALITY PERFORMANCE STYLE at a value giving PRICE.!

THE Manhattan Universal for 1939 has been completely re-designed both from the standpoint of styled appearance, as well as service performance. The Manhattan brings to the lower medium priced field, a range which incorporates advanced devices, (such as Simmer-Save Burners, Draftless Precision Oven and In-A-Drawer Broiler with Savory Smokeproof Broiler Grid), insuring a standard of cooking performance on a par with that offered by any range, regardless of price. Compact, modern in design, the Manhattan is ideal for the apartment kitchenette or the small residential kitchen.

CP



The DeLuxe Manhattan Universal for 1939, when furnished with Automatic Oven Lighter, carries the CP seal of Certified Performance.

The Manhattan Universal is compact, occupying only 36 inches of floor space.

Ideal for the small residential or apartment kitchen.

DeLuxe model equipped with In-A-Drawer Broiler with Savory Broiler Grid.

DeLuxe Manhattan features one giant and three standard Simmer-Save Burners.

Precision Oven assures pre-heat speed plus balanced, even oven heat distribution.

Manhattan DeLuxe, with its advanced devices, gives automatic, controlled performance.

UNIVERSAL GAS RANGES

CRIBBEN & SEXTON COMPANY • 700 NORTH SACRAMENTO BLVD. • CHICAGO

GAS
JANUARY 1939

GUEST Editorial

How To Survive!

By G. A. NEAL

President and General Manager
Sioux City Gas and Electric Company
Sioux City, Iowa

"How can we survive?" That is the serious question many absolutely essential industries, operating on a national scale, are forced to ask themselves.

Their backs are against the wall of severe pressure. Problems seemingly insoluable confront them.

Among those struggling with the problem of survival are the railroads, street car companies, electric utilities, manufactured gas industry and banking organizations. Nor are life insurance companies immune. They are being forced to change their contracts because of very low interest rates.

G A S and gas conventions are full of good advice and good cheer, broadcasting new ideas and tactics. Underneath, however, there is a thinly concealed fear that the manufactured gas industry is headed in the same direction as the street car companies. Competition from other fuels which are subsidized, appears most menacing. The gradual loss of customers in the downtown sections of large cities where the largest mains are located, represents an expensive investment with very little use. In fact, it is not necessary to remind the managers of our business about all of these matters.

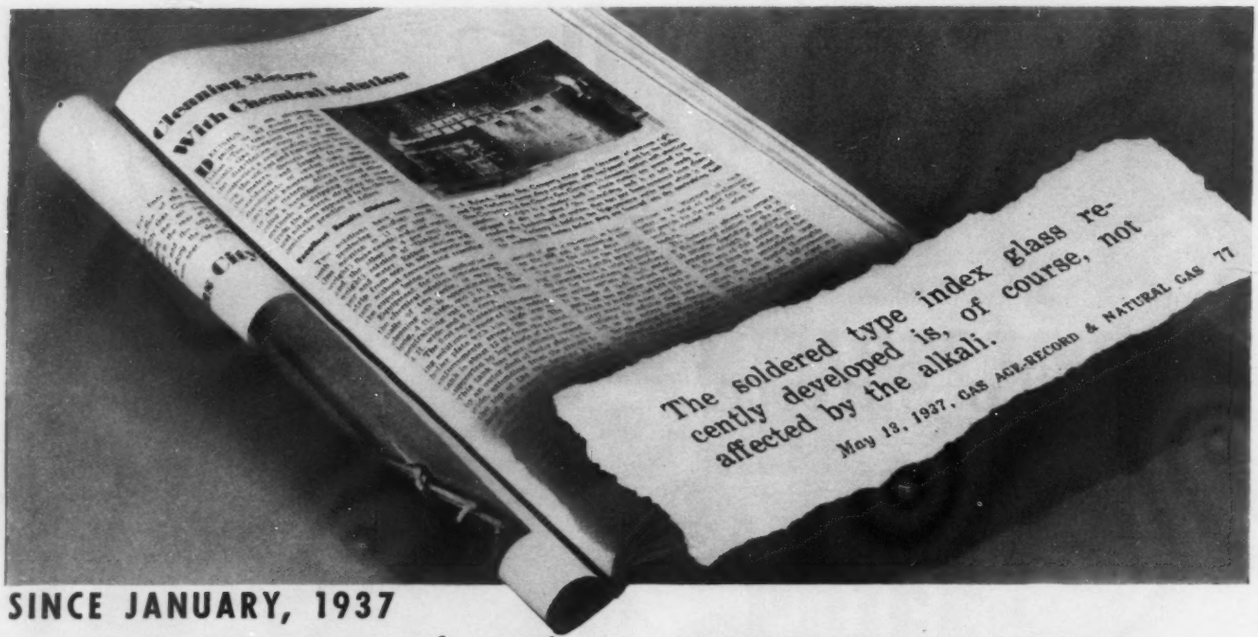
What, if anything, can be done to stabilize our position, to hold our market and to expand it?

At heart, most people prefer to use the fuel which yields a flame. It appeals to an instinct which has come to them through the ages. There are other methods which are automatic, noiseless, odorless, etc., but my experience is that nine out of 10 people enjoy the sight of fire and like to regulate the amount of it to suit their personal tastes.

I believe that the big item is the rate situation.

An analysis of all kinds of public service shows that the average domestic customer can spend $3.00 per month, but above this amount, he must have a bargain if he is to concentrate his fuel purchase in any one service. Some method of pricing must be found which will bring the retail price of gas to an extreme bargain above this amount. My own opinion is that the retail price should not exceed three times the production cost per thousand for any use over 2000 cu. ft. per month, and above 10,000 cu. ft. per month, the retail price should not exceed two times the production cost. This last rule should also be applied to all commercial and industrial rate schedules. At first thought, it may seem that there will not be sufficient margin to pay a return on the investment, but with a goodly volume of business, wouldn't this be enough? There are other ways of stating this idea, but for the purpose of this comment, I am roughing these units to make my idea clear.

If the manufactured gas industry is to prosper, it must obtain more house heating, water heating, refrigerating, summer water heating, commercial and industrial business. We can best get our share of the total business when more nearly approaching the price per million heat units of the most competitive fuel in each market and for each use.


Cleaning Meters
With Chemical Solution
The soldered type index glass recently developed is, of course, not affected by the alkali.
May 13, 1937, GAS AGE-RECORD & NATURAL GAS 77

SINCE JANUARY, 1937

a new standard in **METER VALUES...**

THE AMERICAN
Soldered Seal
INDEX FRAME
AND GLASS
(PYREX BRAND)

• A deep and binding solder seal! The heat resistant Index Glass possesses a metallized (copper) edge. By a special process, the glass is soldered direct to frame . . . resulting in a perfect metallic bond and a permanent, gas-tight seal. Write for fully descriptive bulletin.

ESTABLISHED 1870
AMERICAN METER COMPANY
INCORPORATED
GENERAL OFFICES: 30 EAST 42nd STREET, NEW YORK, N.Y.

THERMALLY *Thinking*

By Stanley Jenks

Editor

Slogans

Slogans, like trademarks, depend on repetitious usage for their value and effectiveness. Good slogans are catchword capsules containing your essence of advertising appeal. They are easy to take and easier to digest. Good slogans are as rare as diamonds.

Herb Schaul, chairman of the A.G.A. house-heating and air-conditioning committee, calls our attention to some snappy slogans that have crept into gas industry usage recently, and bespeaks our cooperation in urging their wider use. Gas appliance manufacturers are asked to help spread the gospel by incorporating in their own consumer advertising such slogans as, "Let gas do the four big jobs—cooking, water heating, refrigeration, house heating," "Join the swing to heating by gas," "The trend today is to gas—the modern industrial fuel." Anything that helps the industry helps every branch of it, and if the idea is helpful, as I feel it is, it is well worth the consideration of everybody in a position to give it a boost.

But the real neck of the bottle is the gas company and its local dealers. It is a safe assumption that gas companies in general spend at least 10 dollars locally for advertising to every one dollar spent nationally, and they definitely control the effectiveness of the industry's sloganeering efforts.

Comparative Specifications

All signs for 1939 indicate that our major sales effort will be in the domestic field, and that the C. P. gas range will be our big gun. The sales campaigns announced by A.G.A.E.M. in our news columns leave little doubt on this score.

There is plenty of room for additional thinking on the C. P. range, especially in view of the tactics resorted to by our electrical friends. It borders on the Hitleresque to see them without any minimum standards or requirements of their own comparable to our A.G.A. Laboratory specifications, set up a trial court in which they are prosecutor, judge and jury, to compare six of their best and most modern jobs with the *minimum* requirements of our C. P. ranges, despite the fact that it is commonly known that our C. P. manufacturers, almost without exception, easily excel the minimum standards necessary to earn the C. P. emblem. Then after the mockery of such a comparison, they blithely claim their report is "unbiased."

The U. S. government in its consumer bulletins has commended the gas industry for establishing the A.G.A. Testing Laboratory, and praised its effort to protect the customer by establishing minimum standards of approval. We have supplemented this initial protection with a second buying guide, the C. P. emblem, which assures the customer that any range so labelled has built into it, invisible to the eye, 22 super efficiencies. As one advertising man has said, "The C. P. emblem gives the woman 'X-ray eyes'."

Far be it from us to take a "holier-than-thou" attitude. We have the utmost respect for the electric industry in those fields in which economically it belongs. But if it is such an up-and-at-'em industry, why has it not seen fit to set up minimum standards on its ranges to guide the consuming public? In this instance, the gas industry seems to be much more alert and aggressive, and certainly more in line with modern trends toward the national labelling of merchandise.

The Commercial Load

Talking of gas rates, and judging by some of the commercial gas rates one sees still in effect, the commercial load can still be dubbed the industry's "step child." While the domestic load is undoubtedly the pay load of the industry, and most sales efforts are justifiably concentrated on it, the commercial load deserves in many instances, far better attention than it gets, especially from the rate-makers.

Usually, the commercial rate is higher than the domestic rate and is one of those so-called "class" rates, theoretically designed to get all the traffic will stand. Years ago, when we had the automatically controlled fuel field to ourselves, and the customer had little choice between using gas or some dubious solid fuel, a premium for gas service was justifiable. But today—ouch! The oil, electric and coal stoker boys have crashed the commercial field with "mass" rather than "class" rates for their fuels.

Increased efficiencies of heavy duty equipment have done much for us in retaining the load, but the fundamental condition, nevertheless, still exists. It is conceded that gas companies have been in a devil of a fix, and that a leave-well-alone attitude was perhaps the sounder policy when times were bad. To cut commercial rates at a time when there was no hope of regaining the lost revenue and not enough new business in sight to offer any compensatory hope, would have been a futile gesture. Accordingly, in protecting what they had, they have made themselves vulnerable to the encroachments of competing fuels, having everything to gain and nothing to lose.

Our French friends say, "Autres temps, autres moeurs"—other times, other methods. These are other times. The gas industry is self-admittedly on the march. Every business index that crosses my desk shows positive gains in business conditions. Better times are the best times to adjust rates for promotional purposes. There is a lot of commercial business going to other fuels that can be secured. The "bottled" gas people who have no inhibitions about demands, capacities and what not in selling to the butcher, baker and candlestick maker, are proving this.

Or, is the business too technical for the domestic department, and too picayunish for the industrial sales department?

Promotional Rates

Everyone who has had practical load-building experience, knows that a good and attractive promotional rate is the first requisite of a successful selling activity. There are sales geniuses, no doubt, who can sell refrigerators to Eskimos or gas domestically for the four major uses at a flat rate for the first holder-full, but—thank God!—most gas men don't qualify as such, but are average human beings, using perspiration as well as inspiration in their efforts to make the gas industry the nation's fuel bin.

In a recent letter, Conrad N. Lauer, president of the A.G.A. wrote:

> "At the turn of the half year, 1938, there was a reversal in the downward trend of domestic gas sales. The industry's use of effective promotional methods, improved appliances and national advertising gives every evidence of having turned the tide."

Mr. Lauer in these brief but trenchant words, reminds the gas industry that "effective promotional methods" among other factors are, in his opinion, responsible for the gratifying progress the gas industry recorded during 1938. "A continuation of this trend during 1939 is most urgently needed and anticipated," he goes on to say. Most of us feel the same way.

Our guest editor this month, a former colleague and old friend, George A. Neal, president, Sioux City Gas and Electric Co., pulls no punches in discussing constructively the future of the manufactured gas business. "I believe," he writes, "the big item is the rate situation." Whether we can go along with him in his generalization of a proper rate structure in terms of holder cost is something else. But Mr. Neal is a remarkably successful utility load builder, and he knows the limitations of price in the popularization of gas despite its inherent advantages over every other competitive fuel.

Emblems

While we are busy popularizing slogans and emblems like those of the C. P. range and the A.G.A. seal of approval, it might be as well to examine closely the official emblem of the A.G.A. Despite an almost continuous association with the A.G.A. since its incorporation in 1919, I couldn't for the life of me have described what was on its official emblem, until I examined it for myself a few minutes ago. Can you? It says we are in the heat, light and power business. Nobody can dispute our position in the heat business, for fuel service is our primary function. But, despite the several "Blank Gas Lighting Companies" that appear in our trade directories, the lighting business and ourselves parted company years ago. Our British cousins marvel at our complacent acceptance of this loss. Is the time ripe to consider going back into the lighting business? There are some gas sales executives who feel it is. With today's modern equipment, there is no question about our ability to handle certain kinds of lighting better and more economically than the electric industry. If you want to see better street lighting, more effective floodlighting and exterior store lighting, take a look at British gas lighting practice as I have done. To a visiting American, it is one of the sights of Europe.

Power! In an industrial age like this, the very word "power" brings up fascinating conjectures. Gas to fuel the engines that turn the wheels of industry. There has been marked progress in the power field, especially in natural gas circles, but the ground has not even been scratched yet. But the load is too valuable, and big developments are in the offing. Hale A. Clark, last year's chairman of the industrial gas section of the A.G.A., is industrial engineer of a company, the Michigan Consolidated Gas Co., that serves a territory (Detroit) where "Industry" is spelled with a capital "I." In a recent letter he tells me that, in his opinion, the most significant development in the gas business this year will be a gas power unit comparing most favorably in performance and convenience with the electric motor it is destined to replace. This has been made possible through the extraordinary development of special alloys for bearings and other engine parts, making a very compact gas power unit package practical.

A Review of 1938

THE YEAR 1938 was one of continued progress and expansion for the gas companies in the United States, according to Conrad N. Lauer, president of the American Gas Association. The charts accompanying this article and Tables Nos. 1, 2 and 3 depict the status of the industry for 1938.

Manufactured and natural gas companies, supplying towns and cities with a population of 81,000,000, served a total of 17,135,000 customers, representing the largest number of consumers ever connected to the mains of the industry, and an increase of 180,000 over the year 1937. Of these, 9,988,000 were served by the manufactured gas industry and the remaining 7,147,000 were served by the natural gas industry. Preliminary estimates indicate that revenues of the entire industry, both manufactured and natural, aggregated $786,576,000 in 1938, a decrease of 1.8 per cent from the preceding year. The manufactured gas companies grossed $367,714,000, a gain of 2.2 per cent for the year, while revenues of the natural gas companies were $418,862,000 as compared with $441,232,000 in 1937, a decrease of 5.1 per cent.

Sales Statistics

Sales of manufactured gas for domestic uses, other than house heating, such as cooking, refrigeration, water heating, etc., amounted to 198,331,000,000 cu. ft., an increase of 1.5 per cent for the year. The gain in house heating sales amounted to 10 per cent. This would doubtless have been larger except for the mild temperatures that prevailed throughout the year in most sections of the country. The number of degree days (the gas industry's standard measure of weather conditions) for a number of the larger cities served with manufactured gas, averaged only 3496 for the first 10 months of 1938, or 10.3 per cent less than the figure of 3897 reported for the corresponding period in 1937. For somewhat the same reason the sales of natural gas for domestic uses which are influenced to a considerable extent by temperature variations, registered a decrease, falling from 359,294,000,000 cu. ft. in 1937 to 350,143,000,000 cu. ft. in 1938, a loss of 2.5 per cent. For a group of the larger cities served with natural gas, the number of degree days for the first 10 months of 1938 averaged only 2609 or 15.5 per cent less than the 3088 degree days registered for these cities during the corresponding period of 1937. Sales of manufactured gas for industrial and commercial purposes in 1938, a year of marked industrial recession, were about one per cent above the previous year, while industrial sales of natural gas declined 15 per cent.

Natural Gas Production

Preliminary estimates indicate that the total production of natural gas in 1938, including amounts used in the manufacture of carbon black and for field purposes, reached an all-time high of more than two and one-half trillion cu. ft., or more than two per cent above the previous peak established in 1937. Approximately 173 billion cu. ft. of natural gas were used as fuel for generating electric power in 1938. This was an increase of nearly two per cent over the previous year.

The sales promotional efforts of the industry toward stimulating the residential use of gas have continued to show a rapid growth. National campaigns on gas ranges, water heaters and refrigerators, tied in with the National Advertising Campaign of the industry, have quickened public appreciation of the value of domestic gas service for the major needs of the home.

During 1938 the industry inaugurated a program for the design, production and sales promotion of a new type domestic gas range with Certified Performance requirements and adopted a special trade mark for ranges complying with these quality specifications. More than 16 range manufacturers are now producing ranges of this type and the number is growing rapidly.

More than one million gas ranges were sold during 1938 and the industry anticipates increased sales during 1939, with greater emphasis upon these quality cooking appliances.

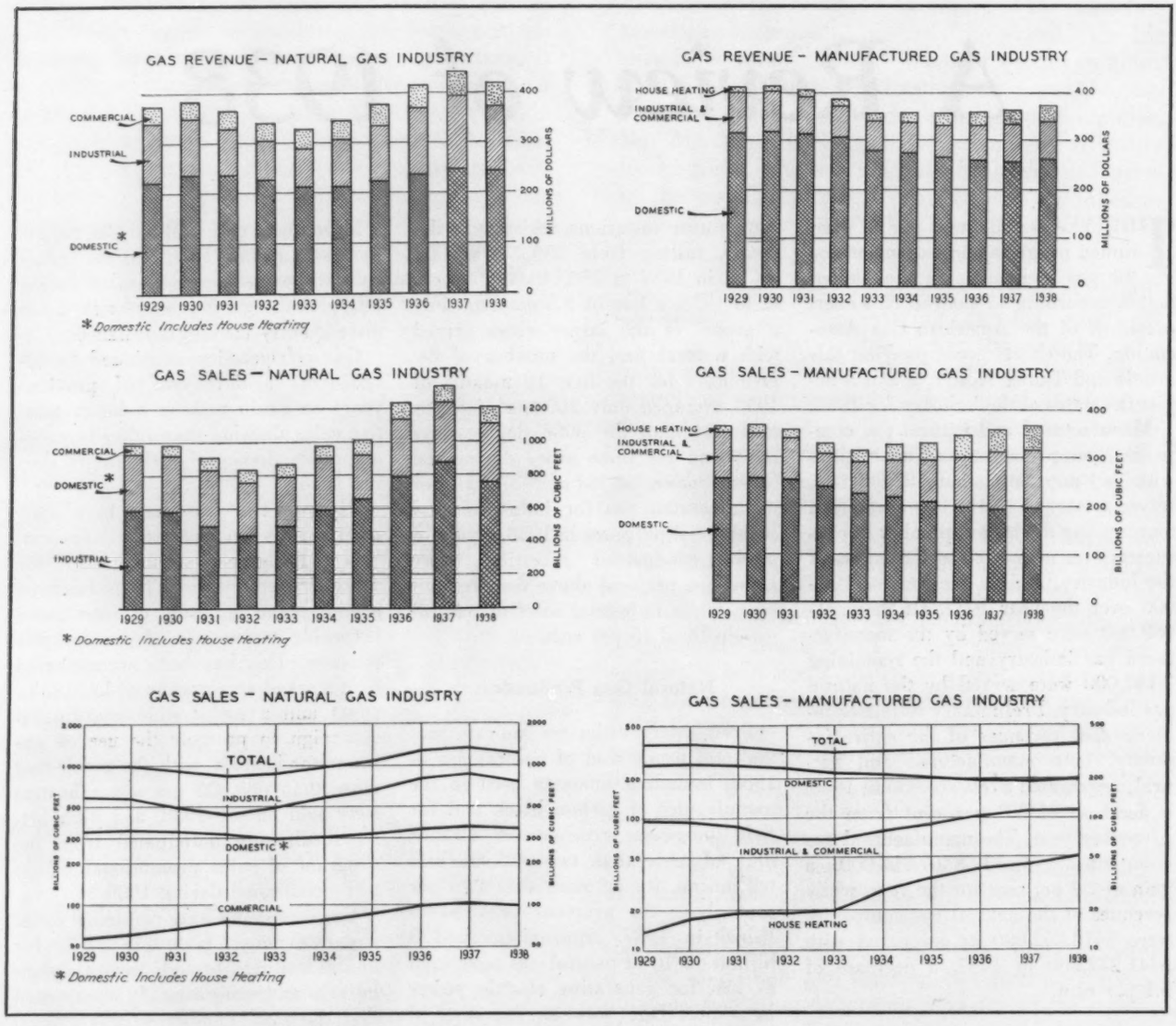
Gas refrigeration continued to advance its achievements of previous years by again making a better relative sales showing than other types of automatic domestic refrigerators during 1938.

The past two years have been characterized by an increasing appreciation of the great potential market for domestic water heating. There has been a widespread adoption of rates more favorable to the use of gas for this purpose. This has been accompanied by a marked acceleration of local sales effort and a nation-wide coordinated campaign to promote the use of gas for water heating, with the result that more than 680,000 gas water heaters were sold during 1938, and even better results are anticipated from the program of sales promotional efforts to be continued during 1939.

Gas companies have continued to inaugurate more favorable rates for house heating through central plant burners and equipment. It is estimated that the total number of gas central house heating installations connected to the lines of all United States gas companies in 1938 amounted to 825,000. In addition there were approximately 1,400,000 dwellings heated by unit heaters, space heaters, floor furnaces, etc., giving a total of more than 2,225,000 homes in the United States that are heated by gas.

All-Gas Home Program

The American Gas Association All-Gas Home Program includes an architectural competition for the design of All-Gas Homes, a builders' competition for the actual construction of All-Gas Homes, and the All-Gas Home Demonstration Program. This program, inaugurated at a time when the subject of housing is being highly publicized and when building is becoming increasingly active will play an important part in assuring the in-


GAS REVENUE - NATURAL GAS INDUSTRY
COMMERCIAL
INDUSTRIAL
DOMESTIC *
MILLIONS OF DOLLARS
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938
* Domestic Includes House Heating
GAS REVENUE - MANUFACTURED GAS INDUSTRY
HOUSE HEATING
INDUSTRIAL & COMMERCIAL
DOMESTIC
MILLIONS OF DOLLARS
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938
GAS SALES - NATURAL GAS INDUSTRY
COMMERCIAL
DOMESTIC *
INDUSTRIAL
BILLIONS OF CUBIC FEET
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938
* Domestic Includes House Heating
GAS SALES - MANUFACTURED GAS INDUSTRY
HOUSE HEATING
INDUSTRIAL & COMMERCIAL
DOMESTIC
BILLIONS OF CUBIC FEET
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GAS SALES - NATURAL GAS INDUSTRY
TOTAL
INDUSTRIAL
DOMESTIC *
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* Domestic Includes House Heating
GAS SALES - MANUFACTURED GAS INDUSTRY
TOTAL
DOMESTIC
INDUSTRIAL & COMMERCIAL
HOUSE HEATING
BILLIONS OF CUBIC FEET
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938

creased use of gas and gas burning appliances in new and modernized homes during 1939.

The first part of the program—the architects' competition—closed on May 23, 1938, and was an outstanding success. Over 5000 of the most prominent architects and designers in the United States and the Dominion of Canada registered in this competition and the hundreds of designs of All-Gas Homes, including separate designs of all-gas kitchens and basements or utility rooms, were highly publicized. Each of the competitors was furnished with definite information and specifications on gas appliances which should result in the increased selection of gas and gas appliances in their future planning and specification activities.

The second part of the program—the builders' competition—for the actual construction of All-Gas Homes is progressing rapidly, with over 1400 builders from all parts of the country officially registered in the competition. This contest is open to any builder in the United States or Canada who builds or modernizes a home using gas for the four big jobs from July 31, 1937 to July 31, 1939.

The All-Gas Demonstration Program for All-Gas Homes sponsored by the local utility company is progressing apace with demonstration homes having been built in 16 cities and viewed by several hundred thousand persons. Reports indicate that a considerable number of demonstration homes are planned for construction in the Spring of 1939.

The success of recent national cooperative sales campaigns, sponsored jointly by the gas utilities and the gas appliance manufacturers, has led to more aggressive campaign plans on the four principal domestic uses of gas — cooking, refrigeration, water heating and home heating during 1939. Closer coordination is being accomplished between these new campaigns and the industry's national advertising program, as well as the national sales programs of the individual gas appliance manufacturers.

The growth of acceptance of these national movements by gas companies insures their more effective use locally. Under the influence of all these factors, it is anticipated that the average annual consumption of gas per residential customer will assume substantially higher levels during the next few years, without considering the marked increases in the sale of gas for home heating.

The sale of non-residential gas for various industrial and commercial applications has increased steadily in re-

cent years. The value of a clean, flexible fuel that can be burned and controlled automatically within close limits is more fully recognized now than formerly. From a technical standpoint industrial gas is penetrating new heating operations each year. For instance, industrial summer air conditioning by gas has been found to have certain qualities that are specially applicable to manufacturing operations in such fields as pharmaceuticals, safety glass, fish drying, high grade printing, film manufacture and chemical production. Gas summer air conditioning has also been successfully applied to large stores, shops, offices, theatres, etc.

The use of gas engines in certain natural gas territories is growing steadily. The economy and flexibility of power generated in this manner appeals to many users.

National Advertising

Demonstrating its confidence in the business future, the association's executive board, nine months in advance of the termination of the gas industry's three-year $1,500,000 campaign of national cooperative advertising, approved a three-year extension of this campaign, starting with July, 1939. A movement is now under way to increase by 50 per cent the advertising budget for the new three-year term.

Financed by 708 operating gas and gas and electric companies, the campaign has brought about a larger volume of national advertising by gas appliance manufacturers and has materially increased both the quantity and quality of local company and dealer newspaper advertising, including many special newspaper sections devoted exclusively to the promotion of the latest models of gas appliances.

With more than 2,000,000 copies of the *Mystery Chef* recipe book called for in person at the offices of Eastern and Pacific Coast companies, the radio program which offers this book in connection with practical talks on gas cooking and homemaking is now being suggested for extension on coast-to-coast network facilities for 1939-40.

The gas industry will be appropriately represented at the New York 1939 World's Fair and the Golden Gate International Exposition. The industry will have its own building and exhibit at the New York fair and one of the outstanding features will be the

(Continued on Page 56)

TABLE No. 1. PRELIMINARY ESTIMATES ON THE GAS INDUSTRY FOR 1938

	1938	*1937*	*Per Cent Change*
CUSTOMERS			
Domestic (Incl. House Heating)	16,115,000	15,043,000	+ 1.1
Industrial and Commercial	1,020,000	1,012,000	+ 0.8
Total	17,135,000	16,955,000	+ 1.1
GAS SALES (M c.f.)			
Domestic (Incl. House Heating)	598,638,000	600,294,000	— 0.3
Industrial and Commercial	964,160,000	1,064,762,000	— 9.4
Total	1,562,798,000	1,665,056,000	— 6.1
REVENUE (Dollars)			
Domestic (Incl. House Heating)	536,990,000	531,938,000	+ 0.9
Industrial and Commercial	249,586,000	269,259,000	— 7.3
Total	786,576,000	801,197,000	— 1.8

TABLE No. 2. PRELIMINARY ESTIMATES ON THE NATURAL GAS INDUSTRY FOR 1938

	1938	*1937*	*Per Cent Change*
CUSTOMERS			
Domestic (Incl. House Heating)	6,596,000	6,465,000	+ 2.0
Commercial	510,000	501,000	+ 1.8
Industrial	41,000	40,000	+ 2.5
Total	7,147,000	7,006,000	+ 2.0
GAS SALES (M c.f.)			
Domestic (Incl. House Heating)	350,143,000	359,294,000	— 2.5
Commercial	99,459,000	102,654,000	— 3.1
Industrial	581,451,000	681,978,000	— 14.7
Electric Generation	172,500,000	170,567,000	+ 1.1
Total Industrial and Electric Generation	753,951,000	852,545,000	— 11.6
Total	1,203,553,000	1,314,493,000	— 8.4
REVENUE (Dollars)			
Domestic (Incl. House Heating)	244,063,000	246,546,000	— 1.0
Commercial	47,381,000	48,152,000	— 1.6
Industrial and Electric Generation	127,418,000	146,534,000	— 13.0
Total	418,862,000	441,232,000	— 5.1

TABLE No. 3. PRELIMINARY ESTIMATES ON THE MANUFACTURED GAS INDUSTRY FOR 1938

	1938	*1937*	*Per Cent Change*
CUSTOMERS			
Domestic	9,289,000	9,276,000	+ 0.1
House Heating	230,000	202,000	+ 13.9
Industrial and Commercial	460,000	462,000	— 0.4
Miscellaneous	9,000	9,000	—
Total	9,988,000	9,949,000	+ 0.4
GAS SALES (M c.f.)			
Domestic	198,331,000	195,400,000	+ 1.5
House Heating	50,164,000	45,600,000	+ 10.0
Industrial and Commercial	108,507,000	107,433,000	+ 1.0
Miscellaneous	2,243,000	2,130,000	—
Total	359,245,000	350,563,000	+ 2.5
REVENUE (Dollars)			
Domestic	260,963,000	256,853,000	+ 1.6
House Heating	31,964,000	28,539,000	+ 12.0
Industrial and Commercial	73,242,000	73,093,000	+ 0.2
Miscellaneous	1,545,000	1,480,000	—
Total	367,714,000	359,965,000	+ 2.2

Utility Advertising Becomes

IN the past, advertising often was approached in either of two opposite ways. Both of them were bad.

There was in one case the less enlightened type of agency which, by resort to melodrama and what not, sought to convince managements that advertising was an extremely difficult and involved undertaking. Only a particularly brilliant and specialized organization should attempt it. The agency making the presentation, of course, had an absolute monopoly on this brilliancy. These tactics in many instances fostered the notion that advertising was all but a dangerous instrumentality except in the hands of the all-knowing.

Then, there was in the other case the heavy-voiced sales manager in whose thinking commissions bulked large to the virtual exclusion of everything else. Advertising was the bunk, he ruled; it didn't do any good. Cut it all out and increase salesmen's commissions. That was the way to get orders. When this viewpoint prevailed, the advertising budget was a forlorn thing indeed and the poor wretch who had to prepare what advertising there was lived a life of pain.

The public utility industry is prominent among those groups whose advertising suffered long in the past from superstitions and phobias. The utilities, in fact, were an aggravated case; they had some extra complexes of their own.

These two extreme and equally weird approaches to advertising seem childish in this advanced day; happily, they are fast disappearing and a commonsense middle-of-the-road procedure is taking their places. Most companies today well know that advertising will do no phenomenal fairyland feats even when prepared by the best talent in the land. And yet they know that when properly administered it is no economic waste, as its critics would have you believe.

This better understanding of advertising's potentialities and limitations naturally has improved its quality, and while its advancement has been general, I believe the advertising of gas and electric utility companies has gone ahead even faster, to a point where it now compares well with that of any business or industry.

READ WHY CHICAGO FAMILIES BOUGHT
60,440 MODERN GAS RANGES
in the Past 12 Months from Stores Throughout the City!
You Can't Beat the Modern AUTOMATIC GAS RANGE for Full-Flavor Cooking and Time-Saving Convenience
Better Meals . . . Quicker . . . Less Work
AN AUTOMATIC GAS RANGE Costs Less to Buy Costs Less to Use
MODERN COOKERY . . . CONSTANT HOT WATER . . . SILENT REFRIGERATION . . . GAS HEATING
THE PEOPLES GAS LIGHT AND COKE COMPANY

This advertisement received the premier award in the 1938 Better Copy Contest of the Public Utilities Advertising Association, the oldest nation-wide copy contest in the United States. This award marked the third year in succession that the Peoples Gas Light and Coke Co. received first place.

This opinion is not wishful thinking. Each week there come to my desk proofs of utility advertisements which have appeared in all parts of the country the week before. The collection is an excellent cross-section.

Week-in and week-out a substantial percentage of this material is modern, attractive, convincing. Not only the large companies who have more to spend in art work and mechanical preparation deserve commendation; smaller organizations are showing a freshness and ingenuity in their work which would have been considered practically impossible a few years ago.

C. G. CASSIDY

What factors have caused this? While, as has been suggested, a more complete understanding of advertising has in a general way been responsible, in what specific ways has this better understanding been applied to day-to-day operations?

In the first place, more companies than ever before are clarifying the advertising department's place in their organizations, giving it well-defined responsibilities and placing in it people who have been specifically trained for their work. The logic for this procedure may seem so obvious that mentioning it is unnecessary. The fact remains, however, that too many advertising departments in the past have been filled with clerical help who had outgrown their regular jobs or with accountants or engineers who "liked to write." While in rare exceptions this method may have worked, it was comparable to putting an advertising man in charge of an audit. Advertising is by no means an exact science and it isn't the mystery which some of the earlier agencies would have prospective clients believe, but it *does* call for specific training and specialized experience.

The task of fixing policies covering relations between sales and advertising departments calls for careful thought. Sales departments are expected to produce sales and advertising departments are expected to produce a program

Of Age

By CLAYTON G. CASSIDY
Advertising Manager
The Peoples Gas Light and Coke Company

A MODERN Gas Range
Costs Less to Buy... Costs Less to Use!
7½¢ COOKS ALL THIS
"It takes a Gas Range to Cook Good Meals"
THAT'S WHY CHICAGO FAMILIES BOUGHT
122,100 MODERN GAS RANGES
in the past 24 months from stores throughout the city!
MODERN COOKERY . . . CONSTANT HOT WATER . . . SILENT REFRIGERATION . . . GAS HEATING
THE PEOPLES GAS LIGHT AND COKE COMPANY

This advertisement appeared during the past month in Chicago daily newspapers. Department stores, hardware stores and other retail range dealers were supplied with "blow-ups" of the advertisement, which they displayed on counters and in windows while the advertisement was appearing in the newspapers.

which helps gain this objective, so naturally it is not always easy to say where one's responsibility ends and the other's begins when there is a difference of opinion as to what is the best method of advertising.

As a practical matter, however, the two groups usually work together very well. The sales department knows what it wants to sell, and when, and decides such matters as well as prescribing pricing and terms. An advertising department of the caliber that a public utility should require today will be the better judge of which is the best medium (newspaper, direct mail, radio, etc.) by which to accomplish a given advertising objective. If the character or "theme-ing" of a campaign is thoroughly discussed, there is no difficulty reaching an unanimity of opinion as to what it should be; that is a joint responsibility.

Suggestions regarding copy should be sought from the selling organization at all times, but final control over the language in specific advertisements rests with the advertising department and the official to which it is responsible. Any other arrangement can be chaotic, for when people in too great numbers get to rearranging a piece of copy, it usually ends up as hodge-podge, reflecting an amazing variety of prejudices and preferences as to choice of words, length of sentences and even punctuation. It is axiomatic that no committee ever wrote a good advertisement. And so today in an ever-increasing number of instances, copy is being written entirely by the advertising department or by an agency under the department's direction.

Being given a reasonable amount of leeway for producing ideas and getting them down on paper, how does the utility advertising department of today go about producing advertisements which will compete successfully for attention with department stores, cigarette, automobile, and all other forms of copy?

Volumes could be written on this subject with perhaps nothing more tangible than one gets out of the average text book on advertising. However, from members of the Public Utilities Advertising Association, which numbers among its members utility advertising people from 36 states and Canada, I have accumulated a few outstanding "do's" and "don'ts" the application of which is contributing to the steady improvement in public service companies' advertising.

These are as follows:

1. *Don't Take Yourselves Too Seriously:* Public doesn't read our ads because they are avid for information about how long we have been in business and what great public benefactors we are. The utility business is a fascinating subject to us because we are in it, but there are easily half a hundred matters in which the public is more interested, including such items as a new car, a new dress, the movies, and beer on Saturday night.

2. *Appeal to the Reader's Own Interest:* People are interested first of all in themselves so they react most favorably to news of things which will benefit them. A woman will develop a desire for a modern gas range, not primarily because it is made and sold by fine, old reliable concerns, but because it will make *her* cooking easier, save *her* money, save *her* time. Likewise with the gas refrigerator, water heater and gas home heating.

3. *Talk the American Language:* The grosser forms of slang aren't necessary or helpful in advertising, but don't forget either that love for ponderous phrasing because it seems dignified can choke off reading interest with the speed of light. In today's copy, talk today's language—be brief, bright, arresting—and your customers will understand you.

4. *Use "Happy" Illustrations:* It isn't stealing a page from Pollyanna to say that readers are drawn to illustrations showing people smiling or laughing. This pleasantness gives your advertisement a friendly appearance—and in that respect does a better institutional job for the company signing it than chapters of talk about hundredth anniversaries and miles of pipe lines. Show-

(Continued on Page 60)

The Natural Gas Industry Provides Opportunities for Investment

By JAMES S. CARROLL

Statistician, Rauscher-Pierce & Company*

IF ANY one industry of today were to be selected as one in which to confine the investment of funds, I would nominate the natural gas industry. This industry not only has had a very remarkable past, but has an extremely brilliant future.

Today approximately 1,500 gas companies in the United States supply gas to more than 8,000 cities, towns and villages having a total population in excess of 80,000,000 — nearly two-thirds of the entire population of the United States. In 1937 the natural gas industry received from its 7,038,000 customers the sum of $441,232,000 for the almost incomprehensible figure of 1,314,493,000,000 cu. ft. of gas. To reach these customers with natural gas service required 179,670 miles of transmission and distribution lines. At the present there are 24 states in which natural gas is being produced and marketed in commercial quantities. These figures give a brief picture of the enormous size to which the natural gas industry has grown in its comparatively few years as a servant to mankind.

Industry's Enviable Record

The major portion of the growth of this industry has taken place during the past 10 to 15 years, during almost half of which period this country was experiencing one of the most serious business recessions in its history. That its growth and development took place despite these obstacles gives the industry an enviable record. Most business barometers of today indicate that business activity is below the level of 1926 (the year generally selected by statistical companies to indicate a normal year), and far below the peak reached in 1929. However, in 1937 sales for the natural gas industry not only were far in excess of those for 1926, but also had registered a 35 per cent increase over sales for 1929. At the close of 1937 the industry had about 20 per cent more customers than it had in 1929. Its actual history during the depression also affords an interesting study. Revenues for the industry registered their lowest figure in 1933, in which year they showed only a 13 per cent decrease from the 1929 level. However, in no year did the total number of active customers decrease below the level of 1929. Even in 1932, in which year the total number of active customers was at its lowest, this business still maintained a four per cent customer increase over 1929. Contrast these figures with the Standard Statistics Index of Industrial Activity, which figure dropped from around 108 in 1929 to about 54 in 1932—half its previous level. In other words, the natural gas industry not only showed considerably more progress than business generally during the period preceding and through 1929, but indicated a great deal more stability during the 1929-32 decline. After 1932, the industry immediately soared to new records.

There are several definite reasons for this phenomenal growth in the utility field. First and foremost, natural gas is cheap. Per B.t.u. of heat, it is cheaper than either manufactured gas, coal, or fuel oil. But even on an equal price basis, it is more economical for industries in that it requires no storage place which demands a tie-up of capital in fuel inventories. It is more easily handled than coal or oil. Since it requires practically no labor for handling, industries have turned to it in a time of mounting labor costs. Also, it is a much cleaner fuel and more efficient in that it leaves no residue and gives an even and easily controlled heat.

Looking at the industry from an investment standpoint, it has many exceptional features. A natural gas company requires only a small amount of labor, which is a particularly important item during inflationary times or business booms. For instance, where there is approximately one employee for every $3,000 invested in plant and machinery in the automobile industry and one employee for each $7000 investment in the steel business, there is one employee for each $37,000 investment in the gas industry. Consequently, labor problems as well as increasing labor costs are eliminated to a great extent. In addition, natural gas companies are not burdened with the problem of inventories. Inventory losses have had serious effects on many industries during business declines, and for this reason usually necessitate a large working capital position. Another safety factor of the natural gas business is that a municipality must have access to a proven and convenient gas field before it can begin any competitive efforts. In fact, to my knowledge, there has never been any actual instance where a municipality installed a competing natural gas system.

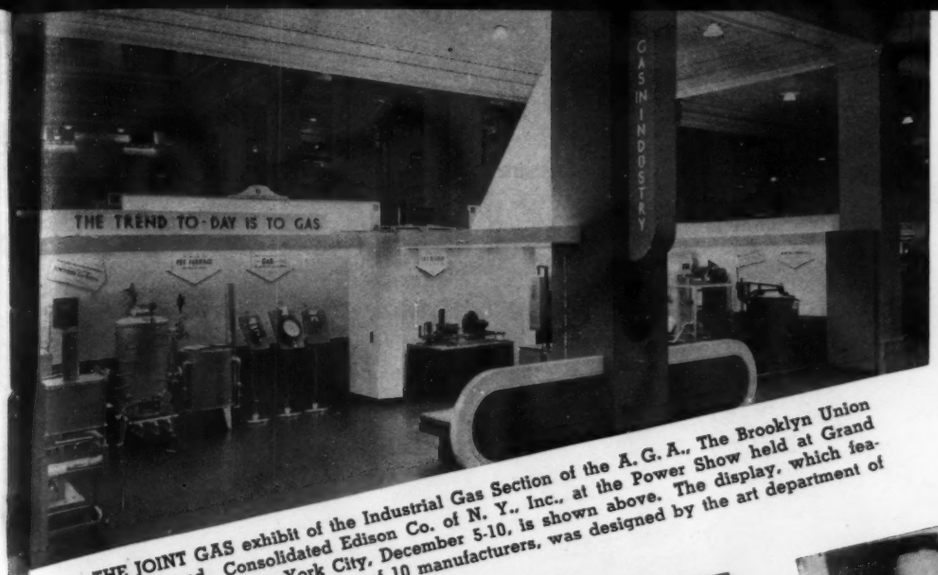
Prospects for Expansion

Prospects for the continued expansion of the industry, both internally and externally, are highly favorable. The American Gas Association, Inc., estimates that there is a market for over 700,000 house-heating customers in the territory now served by natural gas, after making reasonable allowance for mild climate, low buying power, and other factors; also, a market for 625,000 gas refrigerators, after making allowance for buying power and present saturation of automatic refrigerators. With transmission lines 1,200 miles long having already been

(Continued on Page 33)

*Reprinted from *The Southwestern Banker*, November, 1938.

GAS Camera



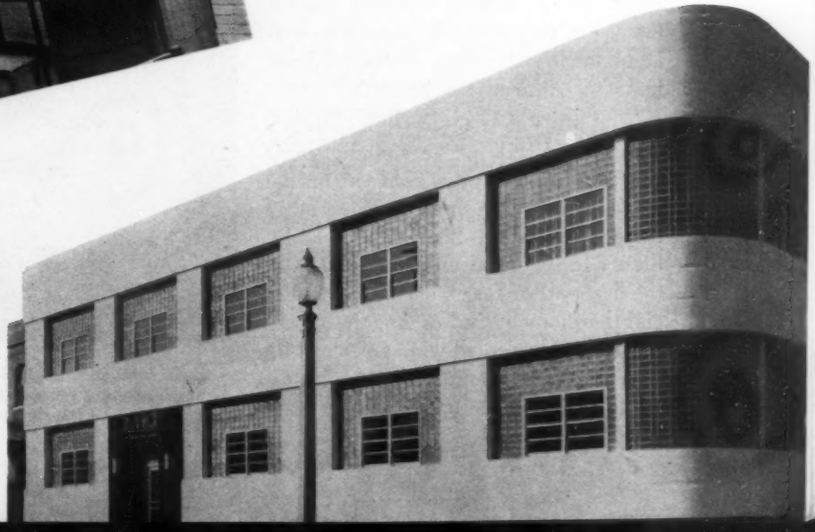
THE JOINT GAS exhibit of the Industrial Gas Section of the A. G. A., The Brooklyn Union Gas Co. and Consolidated Edison Co. of N. Y., Inc., at the Power Show held at Grand Central Palace, New York City, December 5-10, is shown above. The display, which featured the gas fired equipment of 10 manufacturers, was designed by the art department of Consolidated Edison Company.

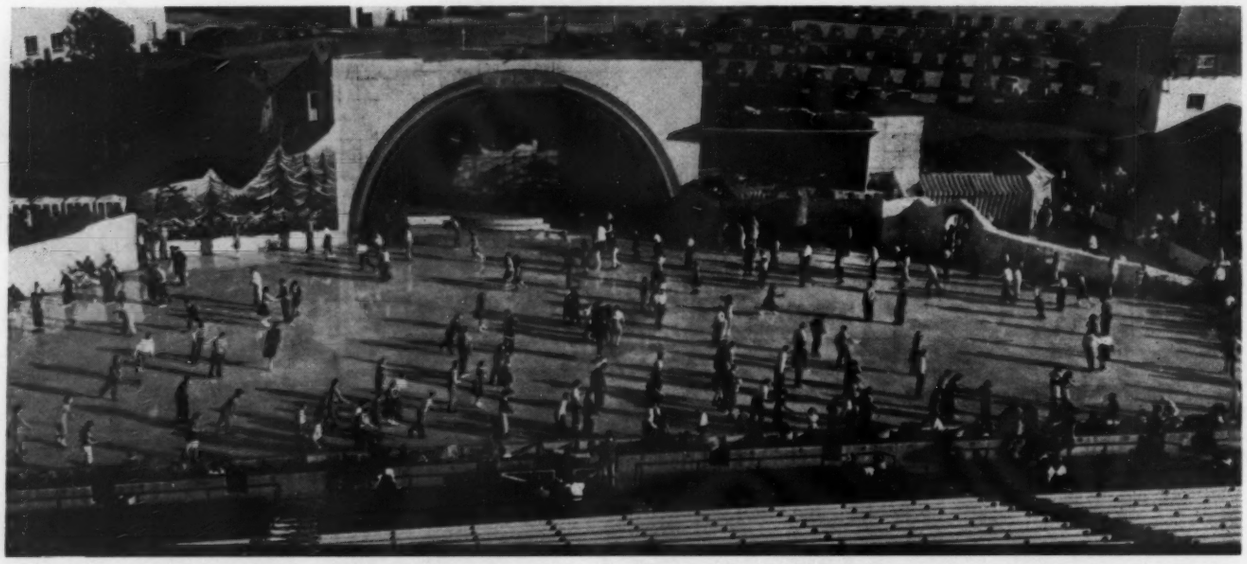
H. N. RAMSEY, chairman of the Sales Promotion Committee of the Gas Water Heater Division of the A. G. A. E. M., and J. W. CLARK, chairman of the Water Heating Committee of the A. G. A., survey the largest batch of tags they've received since the 1938 Prize Parade was launched January 1, 1938, to promote sale of gas water heaters. Every tag represents a gas water heater sold.

SOME OF THE executives who attended the A. G. A. Technical Section organization meeting in New York City, November 18, 1938. Left to right (seated): J. V. POSTLES, Philadelphia, chairman, Advisory Committee; F. M. GOODWIN, Boston, chairman, Technical Section; (standing) E. M. BLISS, Newark, chairman Chemical Committee; C. F. TURNER, Cleveland, chairman, Distribution Committee; F. B. PARKE, Brooklyn, chairman, Gas Production Committee.

ABOVE: Gas analysis laboratory in the new American Stove Company's Research Laboratory building, St. Louis, Mo. Here various tests are constantly run on experimental appliances and parts.

RIGHT: Exterior view of the American Stove Company's new laboratory—an example of the modern functional trend in architectural design, in which much attention is given to lighting, heating and ventilation.





Sun-conscious Southern Californians enjoy year round open air ice skating at the Tropical Ice Gardens, Westwood, California. Natural gas plays an important role in the manufacture of the ice.

Natural Gas Makes an All-Year Ice Rink Something New Under the California Sun

"THE TROPICAL ICE GARDEN" is the cleverly anomalous name chosen for a new amusement venture which is currently exciting interest in Southern California, and causing not a little stir in the refrigeration world. Situated in Westwood Village, thriving little community that has grown up around the University of California at Los Angeles, some 10 miles west of Los Angeles, it offers as the center of attraction an ice skating rink built outdoors; and its backers insist that they will be able to maintain ice for skating the year around. Indoor ice skating in mid-winter is not a new thing even in this land of reputed perpetual sunshine. But ice skating outdoors and all the year 'round—well, people cannot be blamed for thinking it strays a little into the realm of the fantastic!

That it is not a midwinter night's dream, and will prove soundly engineered and quite practicable seems assured. It has been open and operating since November 28, and already, thanks to the usual unusual weather of the first part of December when the official thermometer in Los Angeles reached an unprecedented winter peak of 92 degrees, the refrigeration system's ability to maintain ice under adverse conditions has received a pretty thorough test. One day recently, when the beaches, customarily deserted at this season, were crowded with people escaping from the inland heat, Herman Vetter, refrigeration engineer who installed the plant, checked temperatures in and above the ice. The ice itself registered 28 degrees F. · one foot above, the temperature was 100 degrees F.; and at two feet the temperature was 124 degrees! He concluded, with apparent justification, that they would be able to hold the ice during the summer.

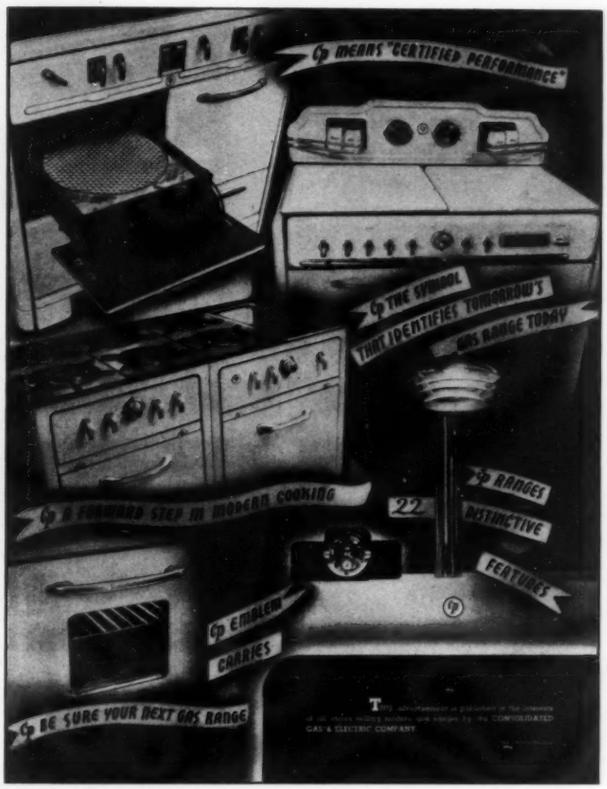
The project represents a bold departure from past artificial refrigeration practice; yet no new principles are involved. Anhydrous ammonia and brine, handled in the conventional way, are employed as refrigerants. The brine, however, is not injected into the usual network of pipes laid over the floor. It is collected in a 12-in. header which

(Continued on Page 37)

H. R. Lamberth, industrial sales engineer, Southern California Gas Co., and Herman Vetter, consulting refrigeration engineer, inspect the Emco No. 4½ meter installed by Pittsburgh Equitable Meter Co. for the gas engine power plant.

The C. P. RANGE—

Its Promotion on The Pacific Coast


C P MEANS "CERTIFIED PERFORMANCE"
C P THE SYMBOL THAT IDENTIFIES TOMORROW'S GAS RANGE TODAY
C P A FORWARD STEP IN MODERN COOKING
22
C P RANGES DISTINCTIVE FEATURES
C P EMBLEM CARRIES
C P BE SURE YOUR NEXT GAS RANGE

This distinctive C. P. Range advertisement of the San Diego Consolidated Gas and Electric Co. was published in "Southern California Pictorial Life."

A CHECK-UP at the year end reveals active participation during the Fall on the part of nearly every major Pacific Coast gas company in the gas industry's first great cooperative effort: the "Certified Performance" promotional campaign launched by the A. G.A. and the A.G.A. E.M. in August. Among companies in the west coast region that gave recognition to the national C. P. advertising and publicity drive are included: Coast Counties Gas and Electric Co.; Portland Gas & Coke Co.; San Diego Consolidated Gas & Electric Co.; Seattle Gas Co.; Southern California Gas Co.; Southern Counties Gas Co.; Tucson Gas, Electric Light & Power Co.; and Washington Gas & Electric Co. Most of the individual company campaigns were geared to a trade-in allowance inducement, the big exception being a very successful essay contest conducted by the Portland Gas & Coke Co.

A. F. RICE

Since most west coast campaigns continued through to the middle of December, it is perhaps a little too early to summarize results. Such returns as are available, nevertheless, indicate that public response at the first six months' mark has been unexpectedly hearty, exceeding the most optimistic estimates. It was recognized generally, of course, that the major objective during the opening months was to secure as high a degree of public acceptance as possible, and the emphasis was placed on sales personnel and customer education rather than quotas.

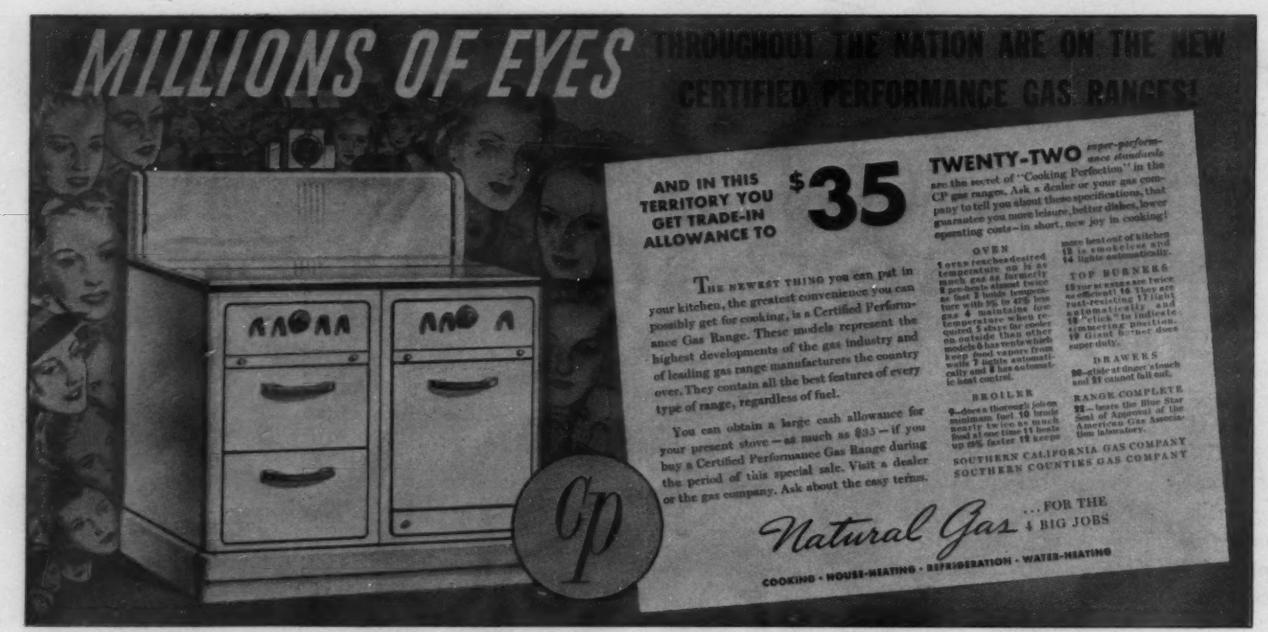
A preliminary survey of selling activity up and down the coast, however, prove that customers are buying liberally already. In the opinion of A. F. Rice, regional manager for the A.G.A. domestic range committee, success of the activity from a sales point of view is already assured.

"Acceptance and support of the Certified Performance gas range program by dealers, manufacturers and utilities here has been unexpectedly good," he stated in response to a query from *GAS* magazine. "I am particularly encouraged by the rapid rate of sale to the public, showing that the public is recognizing sound values and that the trade elements are doing an excellent job in revealing these values to the public.

"In laying out the original program for Pacific Coast participation, although no definite quotas were established, it was anticipated that C. P. range sales might approach the 85,000 mark by the end of the first year. Admittedly this objective is extremely high. Yet despite the fact that no utility got its campaign under way by the opening date of August, and some were as late as October in starting, returns up to the middle of December make it look practically certain that this number of ranges and perhaps more will be sold during the first 12-month period."

Typical of the tie-in campaigns offering a trade-in allowance inducement, was that conducted jointly by the Southern California and the Southern Counties Gas Cos. throughout the territory in their more or less interrelated systems. Because of the unavoidable delay in getting the activities of the entire industry—manufacturers, dealers and gas companies—coordinated, the campaign did not start until October 10. Most of the preliminary preparation consisted of sales meetings to acquaint gas company and dealer personnel with the C. P. program. These were held in the principal population centers throughout the area, and such was the interest on the part of sales people that in a number of cases second meetings, beside the one originally scheduled, had to be arranged to take care of the overflow. Fifteen dealer sales meetings were held altogether, followed by a second series of meetings for all utility employees, their families and friends.

In choosing a trade-in allowance inducement as basis for the campaign, gas company executives were influenced by these considerations: the gas range market in Southern California territory has been worked vigorously for the last five years, and during that


MILLIONS OF EYES
THROUGHOUT THE NATION ARE ON THE NEW
CERTIFIED PERFORMANCE GAS RANGES!
AND IN THIS TERRITORY YOU GET TRADE-IN ALLOWANCE TO
$35
TWENTY-TWO super-performance standards are the secret of "Cooking Perfection" in the CP gas ranges. Ask a dealer or your gas company to tell you about these specifications, that guarantee you more leisure, better dishes, lower operating costs—in short, new joy in cooking!
OVEN
TOP BURNERS
BROILER
RANGE COMPLETE
SOUTHERN CALIFORNIA GAS COMPANY
SOUTHERN COUNTIES GAS COMPANY
Natural Gas ...FOR THE 4 BIG JOBS
COOKING · HOUSE-HEATING · REFRIGERATION · WATER-HEATING
CP

During the C. P. Range Campaign, Southern California Gas Co. effectively used advertising space in the daily newspapers.

time some 50 per cent of the homes have been equipped with new, relatively modern ranges. It was felt, in consequence, that the best marketing possibilities lay in the remaining 50 per cent, and that the best way of reaching these customers was to offer them a substantial inducement to turn in their old ranges. This program had an added advantage in that it enabled salesmen and advertising people to emphasize and magnify the differences between certified performance and the customer's old equipment.

The actual inducement offered was a trade-in allowance for the customer's old range equal to 20 per cent of the selling price of the new range, with a maximum of $35. At the same time a subsidy payment was made to dealers, allowing them to include an additional 10 per cent trade-in without reducing normal percentage.

Advertising Tie-In

The A.G.A. national advertising and publicity program was reinforced by a powerful local advertising and publicity effort. The entire territory was blanketed with strong C. P. messages through every media. Nearly 200 daily and weekly newspapers carried special C. P. range advertisements on a consistent schedule; a special showing of outdoor posters, using C. P. themes, was arranged; more than 200 spot announcements were made over local radio stations; "dash board" signs on the front of street cars carried a C. P. message to shoppers during part of the campaign period; and bill stickers and gas company truck signs were employed for additional messages. Tie-in displays and sales aids to dealers in the form of posters and banners, window strips, counter and easel cards, price tags and stickers, special dealer truck cards, lapel buttons for salesmen, and special letterheads, were also developed.

In summarizing results of the campaign, E. J. Strickland, sales promotion engineer for Southern California Gas Company, stated:

"Our campaign was originally planned for a seven weeks period from October 10 to November 26. An unexpectedly heavy demand in the early part of the campaign, however, produced a shortage of certain C. P. models, and it was decided to extend the program for an additional two weeks, closing on December 10.

"Our primary objective being to build public acceptance, we set no specific quotas; but we hoped that a two months campaign might result in the sale of several thousand units. While statistics on the actual number of sales made are not yet available, it is estimated that they exceed the anticipated quota by a large margin. An indication of the effectiveness of newspaper, radio, bill-board and miscellaneous advertising devoted to the campaign is to be found in the estimate that 40 per cent of all gas ranges sold during the period were C. P. ranges."

A check of other special inducement campaigns in this region shows that they largely paralleled the Southern California-Southern Counties Gas Cos.' promotion.

San Diego's Campaign

R. J. Phillips, engineer in charge of gas sales, San Diego Consolidated Gas and Electric Co., in reply to a query, sent a copy of rules governing their C. P. gas range campaign, which was held between October 10 and November 23. The trade-in allowance offered was the same as that offered by Southern California and Southern Counties Gas Cos., with a similar dealer subsidy.

"The campaign," he states in an accompanying letter, "was preceded by a series of preliminary meetings of leading dealers, to agree upon rules and procedure. At a final meeting all range dealers were invited and the campaign announced.

"Most dealers featured C. P. ranges in window displays and in their advertising. The San Diego Consolidated Gas & Electric Co. sponsored a series of advertisements in local daily newspapers and utilized the local radio sta-

tion for announcements. Truck banners were displayed throughout the campaign on all company equipment except passenger cars, and banners were furnished to dealers who requested them."

The Washington Gas & Electric Co. at Tacoma followed up an introductory campaign from October 1 to November 5, with a second campaign which opened on November 19 and closed on December 17. Special trade-in allowances plus prizes for salesmen were offered in both these promotions.

In the first, an allowance of $7.50 in addition to the normal 10 per cent was offered for the old range, and points were awarded salesmen and general employees for making sales. Everyone received prize money for points scored, and special bonuses were given for high number of points, and for team high scores. A similar set-up was used in the second campaign.

Summarizing results, E. J. Ludeman, commercial manager for the company, states:

"First, we started our C. P. campaign on October 1st, the start of which was preceded by division and group meetings. Mr. C. B. Maxfield, representative of the Cribben & Sexton Co., did an excellent job of presenting the entire C. P. story. We backed this up with a program of newspaper advertising, truck banners, window displays, etc.

"During this campaign 20 per cent of the full featured ranges which counted in the campaign were C. P. ranges."

From Arizona, W. H. Howe, commercial manager of the Tucson Gas, Electric Light & Power Co., reports:

"In the early part of October, we had an evening meeting with the dealers, at which Mr. A. F. Rice of Southern California Gas Co. and Mr. R. W. Campbell of American Stove Co. were present, to outline plans for the campaign. A subsequent luncheon meeting was held, at which time final details were decided upon as follows:

"The maximum trade-in allowance was set at 15 per cent of the retail selling price of the new C. P. range and not to exceed $25.00.

"Co-operative display advertising in the two daily newspapers over the dealers' names was run with one-half the cost being borne by this company and the remaining one-half split among the dealers."

The Coast Counties Gas & Electric Co., according to H. W. Edmund, new business manager, conducted a campaign of six weeks duration using the "old range round-up" theme; and the Seattle Gas Co., according to Norbert O. Fratt, domestic sales manager, put on a promotion in September in connection with the DeBoth Cooking School.

Essay Contest

The Portland Gas & Coke Co.'s big C. P. gas range essay contest, conducted in cooperation with the Gas Appliance Society of Oregon, began on October 3 and ended on December 17. The contest was really divided into three parts, the highlight so far as the general public was concerned being $450 offered in prizes for the best 100 essays written on the subject: "I would like to have a new C. P. Gas Range because ——," together with a statement as to one positive way of identifying a C. P. range.

The other two phases of the campaign consisted of cash awards to company and dealer salesmen. Company salesmen were given awards on the following basis:

A quota of 11 new ranges, six of the first 10 of which were company and four dealer, were set up for each P. G. and C. Co. salesman. When the 11th range was sold, the salesman who made the sale was awarded $25 plus a $5 bonus for every C. P. sale included in his 11 or more range sales closed during the campaign. In addition a first prize of $15 and a second of $10 were offered as sales floor awards.

Dealer awards, totalling $275, were given on a somewhat similar basis, and a special prize of $25 was offered to the company or dealer salesman who told the C. P. range story to the winner of the customer contest.

In response to a request for information as to the conduct and results of the campaign Donald M. Johnston, of the Portland Gas & Coke Co. commercial department, replied:

"There is only one hitch to giving you a complete description of our activities and that is the fact that our C. P. range campaign ends today and accurate figures will not be available until later next week, which wouldn't fit in so well with your rapidly approaching deadline.

"However, I take it that you are more interested in the C. P. activities than in the actual campaign as such, even though it gives every indication of reaching our optimistic quota of modern gas ranges, C.P. and otherwise.

"Details of the campaign were given in the two plan-books, one company and one dealer. Both described the $450 essay contest which was the highlight so far as the general public was concerned. These books also described the $8,254 advertising schedule and showed most of the proofs. The sche-

(Continued on Page 40)

The C. P. Range—the ideal Christmas Gift—was featured in the window displays of the Washington Gas and Electric Co., Tacoma, Wash.

• R. S. CARTER, general superintendent, Malden and Melrose Gas Lifht Company, discusses a section of a paper entitled "Modern British Gas Practices" by S. J. BEALE, general manager, West Gas Improvement Co., New York City. The paper was delivered before the operating division, New England Gas Association, Worcester, Mass., Oct. 28.—Editor.

Benzole Extraction

By S. J. BEALE

West Gas Improvement Company

BENZOLE recovery for motor fuel from gas at coke ovens, gas works and tar distilleries in Great Britain increased from 47 million in 1934 to 61 million gals. in 1936. This increase is explained by a duty on imported petroleum products of 6.7¢ per gal. in 1928, which was increased to 13.3¢ in 1935, and to 15¢ a month or so ago.

According to the Falmouth report on "Oil from Coal" published in February, 1938, almost all coke-oven plants extract benzole—from 97.9 per cent of coal carbonized in 1936, in which year gas works extracted benzole from 47.3 per cent of coal carbonized, which latter figure yielded 12 million gals. of refined motor spirit.

The total of 61 million gals. of refined spirit is only four per cent of total requirements. The report continues, that, if all gas works scrubbed for benzole at the efficiency of coke-oven scrubbing, a further supply of 42 million gals. of crude benzole would be available. The yield of crude benzole from coke-ovens is a little over three gals. per ton of coal and from gas works 2.4 gals. per ton. Refining losses reduce these yields about 15 per cent.

Usual methods used for benzole extraction are scrubbing with oil and the activated carbon process. W. G. Adam and G. W. Anderson said before the world power conference in Berlin, 1936, that the activated carbon process can be used only on purified gas and that 95 per cent distillate is below 120° C. They also said removal of organic sulphur compounds is 70 per cent as compared with 40 to 60 per cent in oil-washing plants.

J. E. Blundell of Carlisle, in a paper before the North British Association of gas managers, September 8 last, made some interesting comparisons. He carbonizes 920 tons of coal and makes 2,466 gals. of benzole per week,

(Continued on Page 31)

Extraction of Light Oil in Manufactured Gas Plants

By R. S. CARTER

General Superintendent
Malden and Melrose Gas Light Company
Malden, Mass.

I HAVE HEARD the thought expressed at various times, if our business is to go ahead, that we should turn our attention to the problem of making a cleaner product. By a cleaner product, I assume the proponents of this idea mean that the gas should be stripped of some of the products that it now carries on to customers' appliances.

We have discussed in the operating division meetings at various times, the necessity of getting more by-products and higher residual credits, in order to lower our manufacturing costs.

Lowering the holder cost is the great desire of all plant operators, and to this end, a study has been made at Malden to determine what could be accomplished if modern apparatus for the extraction of light oils from the coal and water gas made, was installed. In this study it was assumed we could recover 70 per cent on the light oil content of the total gas made during the time we were making water gas. On the basis of these conditions the following results might be expected:

Light Oil Recovery From Mixed Gas

Average coal gas make per day—2,135,000 cu. ft.
Light oil content in coal gas—.29 gal. per M c.f.
Average heating value of coal gas—530 B.t.u. per M c.f.
Average water gas make per hour—180,000 cu. ft.
Light oil content of water gas—.31 gal. per M c.f.
Average heating value of water gas—580 B.t.u. per M c.f.
Water gas produced daily—2,400,000 cu. ft.

It was proposed to mix all of the water gas made with the coal gas made at the same time, and pass this mixture through a scrubber to remove the light oil.

The scrubbing of the light oil from the gas would be done only when water gas was being made, and the light oil scrubber would be by-passed when we were making only coal gas.

It was allowed the following general conditions would prevail when water gas is made and combined with coal gas after the purifiers and the mixed gas is passed through the light oil scrubber.

Water gas produced per hour—180 M c.f.
Coal gas produced per hour—89 M c.f.
Mixed gas produced per hour—269 M c.f.
Water gas in mixture—66.9 per cent
Coal gas in mixture—33.1 per cent
Water gas B.t.u.—580 B.t.u.
Coal gas B.t.u.—530 B.t.u.
Mixed gas entering light oil scrubber—563.5 B.t.u.

CALENDAR

January

Western Regional Conference, Public Utilities Advertising Association—Muehlebach Hotel, Kansas City, Mo., Jan. 31.

February

Mid-West Gas Sales Conference—Stevens Hotel, Chicago, February 9-10.

March

Oklahoma Utilities Association—Tulsa, Okla., March 20-21.
Southern Gas Association Annual Convention—New Orleans, March 19-24.
Wisconsin Utilities Association, Commercial and Technical Divisions of Gas Section—Pfister Hotel, Milwaukee, Wis., March 13-14.

April

Missouri Association of Public Utilities—Muehlebach Hotel, Kansas City, Mo., April 12-14.

May

Association of Gas Appliance and Equipment Manufacturers—Annual convention, Roosevelt Hotel, New York City, May 24-26.
Natural Gas Section, A.G.A.—Annual meeting. Tulsa, Okla., May 8-11.
Pennsylvania Gas Association Annual Convention—Sky Top Club, Sky Top, Pa., May 2-4.

June

Canadian Gas Association—32nd Annual Convention, Royal Connaught Hotel, Hamilton, Ontario, June 1-2.

September

Pacific Coast Gas Association—46th Annual Convention, Fairmont Hotel, San Francisco, Calif., week of September 4.

October

American Gas Association—21st Annual Convention, New York City, week of October 9.

Heat value of mixture leaving light oil scrubber—537.6 B.t.u.
Light oil in mixed gas entering scrubber —.3034 gal. per M c.f.
Light oil removed in scrubber—.2124 gal. per M c.f.
Mixed gas passed through scrubber daily —3587 M c.f.
Coal gas made after light oil scrubber has been by-passed, daily—949 M c.f.
Total gas entering holders, daily—4536 M c.f.
Average heating value of gas; entering holders, daily—535.7 B.t.u.
Daily light oil recovery—762 gals.

You can apply any value you wish to the light oils recovered. Say, for instance, their market value is 7¢ per gal., and if you take credit for a small amount of extra tar recovered daily (about 275 gals.), and deduct from this gross credit, the cost of extra oil required to raise the heating value of the water gas to 580 (as would be in our case), plus the operating expenses for the scrubbing plant, you would obtain a net credit of about $17.25 per day, or approximately $6300 per year.

To a plant operator a possible saving of $6300 per year looks pretty good, but when the capital expenditure required to obtain this saving is considered, plus interest, depreciation, taxes and maintenance, this credit shrinks considerably and you would probably find as we did, the project would not be a commercial success, based on present day prices for light oil.

Of course, there may be some intangible savings that might or might not be realized, if a stripping plant were installed, such as less drip pumping, fewer customers' complaints, and if you are using fuel oil for water gas enrichment, and the disposal of heavy oil tar is a problem, you could use the light oil as a cutting medium and help yourself in this respect.

Perhaps at a later date we might be a bit more enthusiastic about the installation of a light oil stripping plant for our plant, than we are at present, or when business and markets improve, and money for capital expenditures is more readily available.

These remarks are intended to cover the topic of "Benzol Extraction on Gas Works" in Mr. Beale's paper, and I think, in general, it substantiates the conclusions made that for small plants the process of light oil stripping is rarely a source of great profit.

Benzole Extraction

(Continued from Page 30)

or 2.68 gals. per ton of coal. Per gallon of benzole, there are required 60 gals. of water and 50 lbs. of steam, also one-fifteenth gal. of make-up oil. It is unusual for the smaller plants to extract benzole, and one authority gives a minimum size of plant as 20 millions per year with horizontals and 40 millions per year for a plant with verticals. In the general range of send-out gas 450 to 475 B.t.u., there is a loss of 15 to 20 B.t.u. per cu. ft. when scrubbing for benzole, and additional coal must be carbonized to make up this loss. In a plant at Berkhamsted making 100 millions per year, the total cost of one gallon of benzole, including capital cost and repairs, was 13.4¢ which was sold at 19.6¢. Mr. Hodkinson of Stretford in 1935 in a paper before the Manchester District Junior Gas Association said, "Partial benzole stripping causes gum troubles on the district, probably due to the removal of phenols which may act as a gum inhibitor." This occurred with removal of 0.54 gals. per ton as compared with their usual removal of 2.55 gals. There is a great desire in Great Britain to reduce the sulphur content of gas as low as possible, even to three grains per 100 cu. ft. Much can be done by washing with very much larger quantities of oil than are required for benzole stripping. Although this method is sometimes used, it is not really satisfactory and better methods are being sought.

Heating and Air Conditioning Council Meets in New York

THE NINTH ANNUAL MEETING of the Metropolitan House Heating and Air Conditioning Council under the chairmanship of H. G. Schaul, Westchester Lighting Co., attracted a record attendance of 206 when it met December 14 for an all-day conference and luncheon at the Hotel Governor Clinton, New York City.

Speaking on "The sale of gas to new homes," H. Leigh Whitelaw, American Gas Products division, American Radiator Co., stressed the importance of cultivating the builder, who is the foundation of any successful effort to introduce the big four uses for gas into the lower priced homes, constituting by far the greatest part of the new residence building contemplated. "We must know the builder's problems," said Mr. Whitelaw, "and recognize the fundamental fact that once we have completely equipped these new homes, we cannot afford to have them unsold or slow moving in any building development. If necessary, we should even be prepared to help the builder sell them."

H. P. J. Steinmetz, vice president, Public Service Electric and Gas Co., Newark, in his address "An executive looks at house-heating" claimed that the house-heating load is the best kind of insurance to retain the cooking and develop further gas usage.

A statistical outline of the current successful Minneapolis Gas Light Co.'s house-heating sales program, was used by Lyle C. Harvey, president, The Bryant Heater Co., to illustrate his talk "New developments in sales methods."

An inspirational sales talk by R. Louis Towns, sales promotion manager, Surface Combustion Co., was a popular feature on the program, which concluded with a paper on "Commercial heating" by A. M. Slattery, General Gas Light Co. Mr. Slattery advocated a wider use of the estimating formula originated by the Worcester Gas Light Co. in computing unit heater commercial costs.

Manufacturers who exhibited appliances and equipment were the American Gas Products division of the American Radiator Co.; The Bryant Heater Co.; General Electric Co.; General Gas Light Co.; Minneapolis-Honeywell Co.; Surface Combustion Co.

The committee on arrangements consisted of F. T. Head, chairman, Consolidated Edison Co.; E. J. Gerridge, Brooklyn Union Gas Co., and W. A. Scully, Consolidated Edison Co.

Organization of a Utility Accounting Department

THE problems of organizing a modern accounting department to meet the complicated requirements of American industry are numerous and detailed. Therefore this article does no more than suggest the problems which, in my opinion, are of major importance.

L. L. DYER

Unsound organization may lead to excessive accounting costs as well as lack of control due to the fact that conditions of the past decade have brought about a great many changes in the requirements of the accounting department. More information, more reports and more statistics are required, not only by the management but also by the various regulatory bodies.

The volume of work has increased with the utilities to such an extent that it has become necessary to enlarge greatly the accounting department personnel and to establish specialized departments for the purpose of having expert accountants in charge of certain reports and statistical information furnished the various regulatory bodies. The demands for special statistical and accounting reports have increased recently until at the present time the Lone Star Gas Co. is rendering to the various State and Federal governmental bodies some 28,000 reports each year. In larger companies this number of reports is very likely greatly exceeded.

Requirements Once Few

A few years ago the requirements of the accounting department were few, the organization of the department simple. The management of the company usually prescribed policies which in its opinion would best serve the company from a business standpoint requiring only such reports as in its judgment gave adequate information on the financial condition of the company and supplied a set of

• **L. L. DYER, comptroller, Lone Star Gas Co., Dallas, Texas, in a paper, "Accounting Organization Problems," presented before the Joint National Accounting Conference, American Gas Association and Edison Electric Institute, Palmer House, Chicago, Ill., December 13, 1938. —(Abstract by G A S).**

standards for testing performance. It was the aim of the management to have such reports prepared as simply as possible, so that they might be easily understood and at the same time be prepared at a minimum expense to the company.

Over a period of many years the accounting profession had developed a standard of accounting principles which from their general acceptance and usage had become fundamental in the minds of the accountants.

These older standards of accounting have been materially changed and the accountant of today recognizes as accepted practices a large number of new ideas which have come into being on demand of certain regulatory bodies and which, in many instances having been approved by the courts, are now a matter of law and a legal requirement.

Taxes Brought Problems

The serious problems of organization of the accounting department began about the time income tax laws were passed and increased taxes were required to finance the World War. These laws and the regulations issued by the Department of Internal Revenue, in an attempt to ascertain the correct net income of a particular company, established many rules and accounting principles, and introduced certain ideas that were new to the accountant. These ideas have now been in use long enough to have become accepted as proper and correct accounting.

Then came the boom days of the late twenties, when business of all kinds was expanding and consolidating into large organizations. This brought the accounting executive many problems of organization due to the changes in operating conditions and the scarcity of accountants experienced in the new methods of doing business. The incorporation of the holding company in connection with the operation of a large number of firms resulted in problems never before experienced by the accountants, especially those in the public utility business.

In the early part of the depression period there was, of course, a great demand by the public for reduction of public utility rates. Naturally the professional politician took advantage of this situation to obtain votes and many of them in order to cater to public demand, made reduction of public utility rates a political issue.

Protection of Stockholders

For the purpose of protecting the interest of their stockholders and to continue rendering an adequate service to the public, most of the larger companies were forced to establish rate engineering departments to prepare appraisals of the property and compile statements and accounting data to be used by the regulatory bodies and in the courts to establish fair and equitable rates for a regulated utility. This resulted in a considerable increase in the accounting forces and brought about another problem for the accounting executive. He was confronted by the job of coordinating those additional tasks with the regular work of the accounting department to avoid possible conflicts of policy or the issuing of State bodies of statements for other purposes that did not agree with those rendered by the regular accounting department.

Following this trend of public demand for more strict regulation of public utility companies, the Federal Government has assumed a large amount of responsibility in regulating the public utilities, in an attempt to regulate the holding companies and the larger concerns doing an interstate business. To accomplish this properly, numerous laws have been passed and various commissions established for the purpose of administering the regulatory powers delegated to them. The commissions in which the public utilities are principally concerned are the Bureau of Internal Revenue, the Securities and Exchange Commission and the Federal Power Commission, the last two commissions being of major importance to the utilities at the present time.

The establishment of these commis-

sions has brought further problems of accounting organization to the accounting executive.

For the proper functioning of these Federal commissions it is necessary for them to secure a large amount of data and complete information concerning the operating policies, history, rate analysis, financial structure, and operating statistics of the various companies coming under their jurisdiction. This requires that the commissions be organized into various departments, such as engineering, legal, statistical and accounting. Each of these departments, of course, is requesting statements and reports from the companies on a large scale and from several angles of the business.

Attempts to Standardize

It has been the policy of these commissions to attempt to standardize the accounts and reports of the various utility companies so that correct compilation may be made of various reports from the same company or of the same information from several companies.

Under the present organization of most companies, these reports and statements are prepared by several departments, such as production, financial, engineering, operating, accounting, etc., and are supervised by the executive in charge of these various departments. In many instances, due to a long prevailing custom in the company of designating an executive to prepare certain statements and reports, this has resulted in having this work performed by personnel unfamiliar with the services involved. In many cases the reports emanating from these various departments are not coordinated one with another, and especially not coordinated with the accounting records as contained in the general accounting department of the company. Although the information contained therein may be correct from the standpoint of the department making the report, certain general expenses may be omitted or the report may be compiled in such form that it is impossible to check the figures with the reports covering duplicated information issued by other departments.

The commissions, in an attempt to coordinate the work in their offices, are continually checking and compiling the various reports filed with them in the preparation of statistical data and in their line of duty in the regulation of the utility or company. Where the reports and statements of a company are not coordinated or do not follow the established rules and regulations of the commissions in their preparation, it is necessary for the commission to request revised or amended reports or detailed explanations of the differences reflected by the reports on file. The rendering of this additional information and explanation is not only expensive to the company, but in some instances is rather embarrassing.

Those of you who have had experience with the Federal commissions and are familiar with their routine, realize the importance of having all statements and reports rendered by your company, regardless of the department by which they are rendered, coordinated and the information set out in such form that it can be easily located and compared with other statements on file with the commissions.

And finally the most important problem confronting the accounting executive in connection with the rendering of information to the management, regulatory commissions, or the public is the proper organization or line of control exercised by him over the preparation and issuance of all statements and reports, regardless of the department from which rendered. In my opinion, the proper organization for the dissemination of accounting information in its various forms to the several regulatory bodies or the public will do more to instill public confidence and trust in the company than any other policy.

In the distribution of this information, all statements should be of a uniform character and compiled in such a manner as to be readily understood by the average layman. The best way to accomplish this purpose and prevent overlapping of accounting organizations in their relation to other departments, in my opinion, is for the chief accounting officer of the company to be responsible for and have personal supervision and jurisdiction over all statements, records or reports rendered by the company. This would result in the simplification, standardization, and coordination of information furnished by the company, whether it be designed for submission to the management of the company, to a regulatory body, or to the public.

Investment Opportunities

(Continued from Page 24)

profitably constructed, the industry should have further growth into fields now served by manufactured gas and other fuels. Natural gas adds to the general welfare by supplanting higher cost and dirtier fuels and for this reason alone an expanding market appears to be inevitable. Also, the industry has perfected a gas light which in the future may prove to be a commercial attraction. In addition, the definite success of gas refrigerators indicates further use of this fuel in the air-conditioning industry.

The majority of natural gas companies have held their funded debt to conservative figures and have provided for large sinking funds. For this reason these securities have maintained a good record. This record is somewhat illustrated in the October, 1938, issue of the *Natural Gas Industry*, published by the American Gas Association, Inc. The association has compiled a detailed operating statement for the entire industry for each of the past seven years. This statement shows that in no year did the industry as a whole fail to earn its interest and amortization charges, after providing for depreciation, less than 1.43 times (in 1933), while the average for this seven-year period was a coverage of over twice. The average interest coverage for 1937 for the industry was 2.80 times. In a recent bulletin published by *Standard Bond Investments* there is a list of 342 defaulted bonds, which list includes all domestic corporate bonds carried in the service which are currently in default of either interest or principal. There are only two natural gas company bonds on this list, and one of these defaulted prior to the company's changing from manufactured to natural gas.

Undoubtedly, the natural gas industry has proved that it possesses a remarkable stability as well as tremendous future possibilities, and for this reason provides the investor with many attractive investment opportunities.

SALES Slants

Sell Gas Service! Don't Unsell Competing Fuels

"DON'T KNOCK your competitors' merchandise."

That is a basic sales commandment which appears in every sales primer; yet a recent check of a large number of sales presentations disclosed the fact that five out of 10 gas appliance salesmen, selling in competition with electricity, base their talk on a disparagement of competitive equipment. "Electricity is expensive"; "electric appliances are costly"; "you cannot broil on an electric range"; "electric cookery requires special pans and the housewife has to learn to cook all over again"; "electric appliances lose their efficiency"; these are a few samples of the phrases encountered again and again by investigators.

There are any number of reasons why such statements are bad practice. Most of the reasons are so elementary that they will be revealed on a slight amount of analysis. For one thing, criticism of a competitive appliance breeds controversy, and the wise salesman will avoid controversy as he avoids plague. For another, criticism wastes time. The salesman who spends his time telling a prospect how inferior his competitor's merchandise is, is not selling his own merchandise—he is unselling the competitor's.

Positive Points Count

Certainly there are enough positive points in gas equipment to provide the salesman with all the ammunition he needs to sell any gas appliance on its own merits. It may be quite true that electric energy is expensive in comparison with gas. But why sell the expensiveness of electricity? Why not show the prospect how inexpensively he can cook, heat water, heat his home and refrigerate if he installs gas appliances.

If a prospect has previously convinced himself on the superior performance of electricity, it is not likely he will be influenced by the economy factor, since everyone in a position to do so willingly pays more for better service. Consequently, avoid direct comparison. Use the inexpensiveness of gas as a positive selling point.

The same rule applies to the costliness of electric appliances as compared with gas appliances. The chances are that the prospect who is considering electricity knows the amount he will have to pay for the equipment. He has not come to the gas salesman to be told it costs too much. He wants to know what sort of gas appliances he can secure, how much they will cost, and how they will perform.

An Example

Let us take an example:

You are interviewing Prospect Joe Doakes, who is in the market for a range in the kitchen of his new house. You find that he is sold on electricity and electric cookery; he has taken your competitor's word for it, and is convinced that the electric range is cleaner, cooler, more efficient, more modern.

"Look how gas stains the kitchen walls and blackens the pots and pans," he says.

Now you might reply that electric cookery will eventually smudge up the kitchen walls quite as effectively as gas does, and that the smoke from broiling, for instance—something which is absent in gas cookery—will create a much greater soot nuisance than can ever be produced by a gas range.

A more effective presentation, however, can be made positively. You can illustrate graphically by holding an aluminum pan over the flame that the modern gas burner positively never produces a trace of soot. You can take advantage of the opportunity to discuss "waterless" cookery, pointing out that by keeping the steam of cooking down to a minimum the dust and steamy fats in the atmosphere won't be carried to the kitchen walls and stain them, and in speaking of the simmer cooking method, you can direct your prospect's attention to the limitless number of speeds procurable on a gas burner. You can discuss the benefits of broiling instead of frying, made possible on the modern gas range by the fact that the improved broiler does away with all smoke.

"But," Says the Prospect

"But," says Prospect Doakes, "electric ranges are cooler. The heavy insulation keeps the heat in the oven."

You could answer that by pointing to the insulation on the modern gas range oven, which, you could say truthfully, is much more effective because the oven is properly vented. But why not drive home the same point by granting that electric cookery is indeed cool? All modern cookery with up-to-date appliances is cool, you could go on to say. And then you would have an opening to call Mr. Doakes' attention to low temperature oven cookery, made possible by oven insulation and skillful engineering in oven burner design. In this way you would be selling the superior performance of the modern gas range all the time you were answering his objection.

The point is that in every point of performance, construction, economy, and general utility the gas appliance will be found to measure up to the competitive appliance and exceed it. In an ordinary interview, the salesman will be hard pressed to cover over the features which make the modern gas appliance the sound value that it is. If he is selling a prospect who has been bitten by the electric bug, he will be forced to combat the objections the customer will raise. But he can turn such objections to his own advantage and save the precious time needed to sell his own equipment if he will avoid the sin of raising objections of his own to the competitor's.

Questions May Win Where Statements Will Fail

POSITIVE statements, emphatic selling points and assertions of superiority, are piled one on top of another in most sales interviews. They are a part of the selling process. They flow off the tongue so rapidly and smoothly that we don't stop to think of the effect on the prospect.

Often times too much talk becomes tiresome. Again, only a small part of the flow of words may register. Consider this example:

A successful salesman, who became the president of a nationally known company in the East, addressed a sales meeting. He wanted to drive home a certain point. He stopped abruptly in his talk and asked a salesman, who he thought was following his talk closely, to repeat what he said.

The salesman was floored. He had listened, but had missed the point.

That's often the way it is with prospects. You'd be amazed at the amount of business you lose because people listen carefully to what you say, and apparently understand, but do *not* grasp what you mean.

One way to solve this problem is to ask questions. From opening remark to close, questions are a powerful aid to selling.

Ask *more* questions. They clear up foggy points. They uncover objections. They prompt the prospect to start selling herself. They bring sales to a closing point.

Questions may win where statements fail.

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1938 Prize Parade Water Heater Contest Closes

The "1938 Prize Parade," a promotional campaign for the sale of automatic gas water heaters sponsored by the Water Heater Committee of the American Gas Association and 30 cooperating members of the Association of Gas Appliance and Equipment Manufacturers, was brought to a close October 31.

Approximately 900 utility companies were entered in the Prize Parade, making it the most successful promotional campaign for the sale of automatic gas water heaters ever held. This number exceeded by 150 the number of gas companies registered in last year's campaign.

Promotional literature telling how full advantage could be taken of the 1938 campaign was sent to the 30,000 plumber dealers enlisted in the campaign. It has not been determined how many prizes there will be, as the prize-redemption certificates are still coming into the campaign headquarters.

A. G. A. E. M. Plans C. P. Gas Range Program for 1939

PLANS for an extensive nationwide promotion during 1939 in behalf of the C. P. gas range program have been completed, Alan P. Tappan, chairman of the Association of Gas Appliance and Equipment Manufacturers' domestic gas range committee, has announced.

Four major campaigns will project this national promotion during the coming year, Mr. Tappan stated. They will be put into effect as follows: Spring campaign (April, May, June); Summer campaign (July, August); Fall campaign (September, October); and Holiday campaign (November, December).

It was announced that in the planning of the coming campaigns much attention was given to "the merchants' point of view." During recent months, over 100 questionnaires have been sent out to leading merchandisers of C. P. gas ranges in all parts of the country asking for suggestions for an effective 1939 program. These suggestions were collated and embodied in the 1939 promotional plans. It is expected that this national program "will comprise one of the most intensive yet devised."

The American Gas Association's national advertising program will feature 20 range ads during the first eight months of 1939 in such consumer publications as *Saturday Evening Post, Good Housekeeping, Woman's Home Companion, McCall's, Ladies Home Journal, American Home, Better Homes and Gardens, House and Garden, House Beautiful,* and others. Each of these advertisements will be directed toward acquainting the consumer public with the C. P. seal and will stress the improved cooking performance of the new C. P. gas ranges. The national advertising program during the early part of 1939 will reach over 17,000,000 readers.

During the forthcoming C. P. range promotion, the United States will remain divided in 16 divisions with an equal number of regional managers under the leadership of Frank M. Houston, chairman of the American Gas Association's Domestic Gas Range Committee. Due to the increase in scope of the national program, additional associate managers are being added to these regional staffs in order to secure greater nationwide dealer and utility coverage. In addition to these new appointments, the Association of Gas Appliance and Equipment Manufacturers is adding to its paid promotional staff additional help at A.G.A.E.M. headquarters to assist in the preparation of localized promotional pieces. The association is also planning to add new members to its field staff as aids to the regional managers in conducting regional campaigns and meetings.

It was announced that much stress will be made in aiding sales outlets in their local promotional endeavors. Many sales promotion items will be supplied them by the A.G.A.E.M. These will include: newspaper mats, window displays, sales-floor demonstrators, direct mailing pieces, hand bills and broadsides, showroom and window banners, bill enclosures, salesmen's visualizers, souvenir banks for customers, and many others.

Material having to do with the Spring campaign will be mailed to dealers and utility companies on about February 3 by the A.G.A.E.M. Material for the Summer campaign will be forthcoming some time next May.

It has been disclosed that the manufacturers of the C. P. gas ranges have widely acclaimed the 1939 program, cost of which will be approximately double that of the 1938 promotional program.

■ ■

A. M. Heard, Former Head of Manchester Gas Co., Dies

Arthur M. Heard, former president and director of the Manchester Gas Co., Manchester, N. H., died November 27, at the age of 72. Because of ill health, Mr. Heard retired from the presidency of the company in December, 1937.

Prior to the organization of the Manchester Gas Co., Mr. Heard served as director and president of the Peoples Gas Light Co., predecessor of the Manchester Co. He was graduated from Amherst College in 1888, and later served as national bank examiner in Kansas, cashier of the Merchants National Bank at Manchester, president of the Amoskeag National Bank, and director of the Federal Reserve Bank of Boston (1914-1918).

Okla. Natural Conducts Dealer C. P. Sales Drive

THE OKLAHOMA NATURAL GAS CO., conducted a campaign in cooperation with dealers and distributors, to promote greater sales of Certified Performance gas ranges in Oklahoma. The campaign opened November 14 and continued until Christmas.

An attractive booklet sent throughout the 40 communities in which the company has transmission and distributing properties characterizes the C. P. range as the "cooking marvel of the age," outlines the new features of this range and lists the gas appliance and equipment manufacturers who have conducted the necessary research and provided the funds for the development of the C. P. range program.

The Oklahoma Natural Gas Co. booklet also outlines the various ways that the sale of C. P. ranges can be pushed, shows that their sale means greater profits to the dealer, more satisfied customers, and new and better opportunities for salesmen. Several pages are devoted to presenting the advantages to the housewife in time and money saved through use of the new ranges.

Although utility companies cannot sell appliances under Oklahoma laws, the Oklahoma Natural Gas Co. stimulated sales by distributors and dealers by offering a cash bonus of $2.50 for every C. P. range sold by a salesman during the campaign, also a bonus of $1.00 to each Oklahoma Natural employee who furnished a prospect which resulted in a sale. The company also supplemented these efforts with newspaper advertising, folder enclosures with bills, distribution of match books and other advertising methods. No sales quotas were fixed, the campaign having been conducted along advertising and promotional lines by the gas company.

The Oklahoma Natural also concluded last month a six-weeks floor furnace and water heater campaign under the title "Sooner City Election." Quotas were equalled or exceeded in most of the seven districts of the company. "Nat Gas" was running for "mayor" against "Cole N. Wood" and Nat Gas won in the final election returns which were based on credits for number of points made by salesmen. Hundreds of valuable prizes were offered to salesmen, the value of the prize won depending upon the number of points made by the salesman.

Essay Contests Sponsored By Natural Gas Section

TWO essay contests sponsored by the American Gas Association and directed to the attention of the natural gas industry have been announced by Thomas R. Weymouth, chairman of the Natural Gas Section of the Association. A total of $150 in prizes is being offered for the best essays submitted in each contest before March 15, 1939.

The subject selected for the first contest is "The Duties of a Local Manager." This subject will cover all phases of the resident management of a natural gas utility serving a specific city or town. The second contest is similar in scope but covers specifically "The Duties of a District Manager." This subject includes all phases of the resident management of a natural gas utility serving several towns or cities.

Prizes in each contest will be: first, $25.00; second, $15.00; third, $10.00; five honorable mention prizes, $5.00 each. Each contest will be run separately.

The following rules govern both contests:

1. Contest is open to all employees of member companies of the American Gas Association.

2. Papers must be limited to maximum of 10 pages, double space.

3. Papers must be typewritten on sheets 8½ x 11 in.

4. Original and three copies of each paper must be submitted.

5. Papers must be forwarded on or before March 15, 1939, to E. H. Poe., secretary, Natural Gas Section, American Gas Association, 420 Lexington Avenue, New York, N. Y.

6. The decisions of the judges are to be final.

7. All papers submitted in the contest are to become the property of the Natural Gas Section of the American Gas Association.

As a special feature of the contests it is contemplated that the authors of the prize winning papers will present them at the annual meeting of the Natural Gas Section at Tulsa, Okla., in May 1939. Present plans call for a session of the meeting to be devoted to the problems of local and district managers of natural gas companies.

■ ■

A.G.A.E.M.'s Advertising Managers Contest Closes

The nationwide contest being conducted by the Association of Gas Appliance and Equipment Manufacturers awarding prizes to advertising managers of gas utilities and combination companies in the United States and Canada whose local advertising activities best tie-in with the American Gas Association's national advertising campaign, closed at midnight, December 31.

The competition, opened on March 1st, was created as a means of stimulating greater interest on the part of local companies in the American Gas Association's national advertising campaign. It was aimed at inducing gas companies to tie-in their local promotional efforts more closely to the national advertising endeavor.

All forms of local advertising such as newspaper copy, window displays, direct mail and other promotional literature, radio, magazine space, and car-cards and outdoor billboard advertising were entered.

■ ■

Peoples Gas Light Booklet Offered for National Use

Through the courtesy of Clayton G. Cassidy, advertising manager, The Peoples Gas Light and Coke Co., Chicago, a new edition of the booklet, *Cooking Made Easy*, is offered for use nationally. The four-color cover, two-color interior, the many posed illustrations and the excellent recipes, make this an outstanding promotional piece on the four domestic uses of gas, with emphasis on the C. P. range.

Cost of the new booklet is based on a uniform price, irrespective of quantity, of 5¾ cents per copy, f.o.b. Chicago, Ill.

■ ■

Thanksgiving Range Sale Held by Gas Service Co.

The Thanksgiving range sale, sponsored annually by the Gas Service Co. of Kansas City, Mo., was brought to a close November 23. A total of 1,532 gas ranges were sold and added to the company lines by the sales department and dealers during the 12-day campaign. Last year's total was 1,231.

Thanksgiving turkeys were presented to all customers who purchased ranges during the campaign. The company also provided turkeys for dealers to present to their customers for every modern gas range sold during the 12-day period.

Wahl Wins Cup in Brooklyn Union Sales Lead Contest

NICHOLAS WAHL, assistant supervisor in the credit and collection division of the Brooklyn Union Gas Co., Brooklyn, N. Y., won temporary possession of the H. R. Jesper Achievement Trophy for turning in the most sales leads in a contest between 15 groups of employees of the company's Queens district. The contest began August 8 and ended October 15. Mr. Wahl was leader of a group of 23 collectors who earned a total of 3,005 credits. O. C. Woller, manager of the Brooklyn Union Jamaica branch, made the presentation of the cup.

Credits were awarded the different groups on the following basis: to groups consisting of customers service employees one credit was allowed for each sales lead submitted; to groups of indexers, collectors, and field inspectors five credits were awarded for each lead; and to groups of non-contact employees 20 credits were given for each lead.

The contest was planned and supervised by O. C. Woller, Alfred R. Gledhill, manager of Queens district, and Louis J. Stetefeldt. Carl Below, district sales manager, also aided by giving talks at weekly meetings.

A new contest beginning October 16 and ending December 31 has been held. The Jesper Achievement Trophy will now pass to the leader who has earned the greatest number of credits during that period.

■ ■

Oklahoma Dealers Hold Two-Day Sales Meeting

Over 500 Oklahoma gas appliance dealers and salesmen attended a two-day conference, which convened December 1 and 2 at the Skirvin Hotel, Oklahoma City. The chairman was Carter Mullaley, vice-president of Hales Mullaley, Inc., Oklahoma City, which sponsored the conference.

One of the principal speakers was Congressman-elect Mike Monroney, of Oklahoma City, who spoke on dealer-utility cooperation in the merchandising of gas appliances.

Among out of state representatives present were George S. Jones, sales manager; Dolph Jansen, Jr., assistant sales promotion manager; and William Reynolds, advertising manager, all of Servel, Inc., Evansville, Ind.; A. L. Kincaid, of the Ward Heater Co., Dallas, Texas; Sam Folsom, of Folsom Co. (heaters), Dallas; Forrest N. Hall, of the Chambers Range Co., Dallas; Rey Lyons, of the L & H Gas Range Co., Dallas.

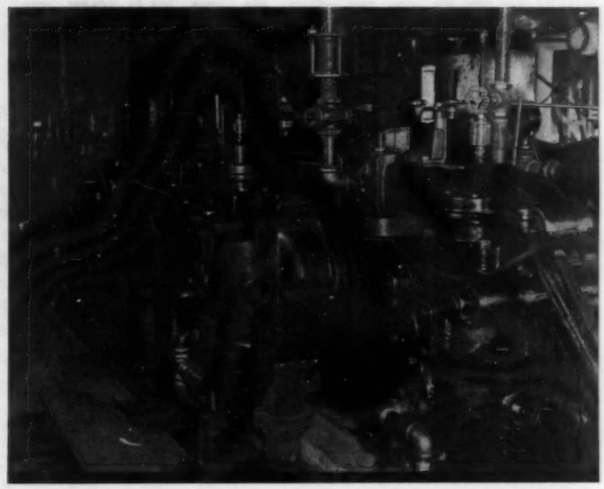
■ ■

Mississippi Utility Names Hussey Personnel Head

The newly created customer and personnel relations development department of the Mississippi Power & Light Co., Jackson, Miss., will be headed by Clyde Hussey, who joined the company this fall. Mr. Hussy was formerly affiliated with the Tennessee Public Service Co. as manager of the Knoxville division. Prior to that he was with the Florida Power & Light Co. at Miami.

The functions of Mr. Hussey's department will include customer relations, personnel supervision, and training work in cooperation with the sales promotion and advertising departments.

◆



Natural gas engine installation which furnishes the power for the ammonia compressor units for ice manufacture at the Tropical Ice Gardens.

◆

Gas Makes All-Year Ice Rink

(Continued from Page 26)

runs along one side of the rink, and distributed into a series of cells four ft. wide and the width of the rink long. These are made of steel plates and laid so as to form a continuous surface over the whole area of the rink, bringing the entire body of the ice in direct contact with the refrigerating surface all the time.

It will not surprise gas people to learn that natural gas engines were chosen to furnish power for the ammonia compressor units. Economy, of course, was the prime consideration in the selection. Contemplated continuous year around operation with resultant high annual load factor made it a rather more outstanding item than usual. The units consist of two Western straight line 200 hp. twin horizontal engines, directly connected to Worthington 10 x 20-in. ammonia compressor cylinders. Each unit has a capacity of 182 tons of refrigeration at 25 lbs. per sq. in. suction and 155 lbs. per sq. in. discharge pressures.

The problem of vibration, which would have been objectionable, was solved by pouring the reinforced common foundation of the engines to approximately twice the normal depth. Engine mufflers were specially designed and installed to eliminate exhaust sound. The silencers consist of two individual concrete lined rock filled pits through which the exhaust pipe extends into a four-ft. expansion chamber. The exhaust pipe within the rock-filled pit is slotted to provide openings equal to one and one-half times the cross sectional area of the pipe. Exhaust gases are conducted to the atmosphere through a riser pipe from the expansion chamber.

A hill which rises steeply on the west side of the rink was terraced to provide seating arrangements for an audience of 10,000 people. An ice extravaganza, featuring figure and acrobatic skating, was offered as an initial attraction, and the backers expect to put on ice shows and various athletic events as a regular feature of the institution. Attendance for the first few weeks has been highly satisfactory.

■ ■

Citizens Gas and Coke Co. Promotes D. D. Piper

D. D. Piper, formerly house heating sales manager of the Citizens Gas and Coke Utility, Indianapolis, Ind., has been promoted to merchandising sales manager, according to an announcement made by E. G. Peabody, general sales manager. The promotion became effective November 6.

The reorganization of the entire gas appliance selling personnel of the Citizens Utility was announced at the same time. In the future each salesman will sell every kind of appliance, as a result of merging the house heating and appliance sales departments.

■ ■

"The Gas Flame" Enlarged

The Citizens Gas and Coke Utility, Indianapolis, Ind., has recently changed the style and format of its house organ, *The Gas Flame*. Formerly a four-page sheet employing tabloid layout, the publication is now a 16-page magazine with magazine style layout.

THE WOMAN'S *Viewpoint*

Winter Refrigeration

In the current issue of *McCall's* Magazine, Kathleen Robertson, house equipment editor, makes out a convincing case for the winter use of the automatic refrigerator, in an article that reads easily. We know there are many women who mistakenly think it is an economy to shut off the refrigerator in the wintertime, and trust their perishable foods to the vagaries of what might happen on an outdoor kitchen ledge or back porch, and furthermore put themselves to all kinds of trouble thinking they are saving themselves what? At the most, a few pennies a day. Of course, they are not really saving themselves anything, for any possible savings are more than offset by the expense in food spoilage through their failure to appreciate the real merits of constant temperatures as provided by automatic refrigeration.

Miss Robertson has earned the everlasting thanks of the gas industry by carefully stressing "automatic refrigeration" without feeling the need to label it "electric," as many writers so carelessly do. Well informed, as she no doubt is, she is aware of the fact that the actual refrigeration in both types is produced the same way. The sole difference is that the gas flame percolates the refrigerant and therefore dispenses with moving parts and their noises, while the electric refrigerator pumps the refrigerant, and needs this and that to do it. From this point, you figure cost of operation, dependability and length of life if you are buying wisely and "take your choice."

The Book of the Month

I know how the advertising profession appeals to women. There are many successful women in it. Helen Woodward was one of the first women to win outstanding success in this field. Her book, *It's An Art* (Harcourt, Brace & Co., $2.75) was published recently. It is a witty, amusing, informative and engrossing textbook on the practical side of almost all sides of what constitutes the modern "art" of advertising.

While much is autobiographical, a considerable and most interesting part of the book is devoted to the hypothetical sales promotion of a canned fruit. We are shown consumer surveys, analyses of consumer tastes, habits and reading preferences, preceding the advertisements written from them. There is one chapter entitled "Why the woman likes the can opener." It really is a most enjoyable book and, as I said before, it will make your favorite magazine far more interesting when you can yourself, spot the advertising "art" which succeeds mostly through its ability to conceal itself.

Customer Acceptance

It is a pretty fair assumption that the more favorable things our customers know about gas service, the more they will like it and appreciate its real value. I am wondering if you have seen a copy of a new magazine, *Today's Home*, written especially for gas customers? The first issue in November was swell, and contained a mine of information that I know will interest any home maker. Everything in it was about better home making with special emphasis on how gas service and modern gas appliances can contribute. It told the kind of story and left the kind of impression I feel sure every home service girl wishes she could leave after every home call. *Today's Home* is not sold on newsstands, but in bulk to those gas companies who feel it worth their while to send to all or a selected list of their customers. It is a new ally in gas appliance merchandising and load building, and I am sure those gas companies who are using it are finding that it supplements their own home service activities, and also makes a fine local tie-in with the national advertising the A.G.A. is running.

Thank You

So far, and after two issues of this page, most of my correspondents have proved to be home service girls. I suppose this is to be expected, seeing that they are recognized as the most articulate group of women in the gas industry. But in our last November issue, when Miss Jessie McQueen of the A.G.A. headquarters staff was guest editor, she estimated that there were at least 20,000 women gainfully employed in the gas industry, and relatively speaking, very few of this total, I know, are home service workers.

And are we mice or are we women? The false modesty of some of my correspondents surprises me. "Please don't mention my name" they ask, as if there would be any need to duck if the thought, idea or suggestion they bring forward is constructive, impersonal and for the good of the industry.

One girl noticed in the November issue that purposely on our part, we printed Mr. Mettenet's paper, "What does a sales manager expect of home service?," on the adjoining page. She suggests an article, "What the home service department expects of the sales manager." Asked to write it as a companion piece to the Mettenet opus, she smilingly said she'd lose her job if she did. I know it's bad business to criticize the boss, but sales managers aren't the ogres some of them might appear to be, and it might be for the good of the industry at that, if . . . well! I am sure that Mr. Mettenet hurt no girl's feelings when he spoke frankly but impersonally about home service departments. I know we women are often accused of taking things far too personally in business. But that's one thing any career woman must resolve to overcome if she means to succeed, and I don't care what business she is in. Perhaps, if we throw these columns open to such a discussion we should avoid all pitfalls and make the subject "What home service expects of the sales department." Then there can be no hard feelings either way.

Now that this page is getting better known, I am looking forward to its becoming a real forum for gas industry women opinion, and an outlet for ideas and suggestions that will help both the industry, which can profitably use the woman's viewpoint in its load building plans, and the gas women themselves, by building in the industry a greater appreciation of their merit.

The C. P. Range Program And Home Service

• **RUTH SOULE, The Brooklyn Union Gas Co., Brooklyn, N. Y., in a paper, "Home Service in the C.P. Range Program," presented before the 20th Annual Convention of the American Gas Association, Atlantic City, N. J., October 10-13, 1938.—(Abstract by G A S).**

THE responsibility for home service has four aspects:

1. Testing ranges.
2. Selecting models for merchandising.
3. Planning a program to tell the story.
4. Getting the story to the customer.

The Brooklyn Union Gas Co. tests every range model that is considered for sale with the idea of insuring customer satisfaction. For this test ranges are set with controlled pressure on rated input, and tested for preheating time with a thermocouple and for performance with four layer cakes, cup cakes, biscuits, toast and steak. Top burners are tested for speed. Outside temperatures are spot-checked with a surface pyrometer. All the ranges tested surpass C. P. requirements in some particulars, and we have learned many things that serve as selling points. We have need of help from our shopmen during this procedure, and a word must also be said in appreciation of the cooperating manufacturers.

Only ranges that have passed the tests are considered for sale. We share responsibility with the sales and merchandise managers in making this selection, and check our own opinions by getting opinions from the women who attend our classes as to the features they prefer.

Planning a Program

Planning a program to tell the story involves work with employees as well as with the public. Presentation of the C. P. story for salesmen included a comparison of a C. P. and a B. C. range, each connected with a large meter and each presided over by a home service girl. The sales manager, W. E. Bolte, appointed timekeepers and meter readers, and told the sales story. As he brought out the 22 points, the girls illustrated them in pantomime. For speed of the new giant burner whistling teakettles were used. Speed of preheating, economy of the banked flame, and guesswork on the part of the owner of the B. C. range were shown by stop watch, meter, and pantomime. Steak was broiled and toast made in both ranges to show economy, speed, smokelessness and heat distribution. Water in glass saucepans illustrated accuracy and economy of the simmer burner. Completing the story, was a skit, a trial of ranges of various ages, in which charges included arson and breach of promise. The C. P. range was charged with alienation of affection, but our talented defense attorney, J. Dewey Howley, saved the day.

A number of companies besides ourselves report talks given shopmen. Manufacturers Light and Heat Co. of Pittsburgh plans demonstrations for employees and dealers. Washington Gas Light Co. has breakfast contests for its salesmen and demonstrations for its shopmen.

Following are some of the ways through which various companies bring the C. P. story to their customers:

Ohio Fuel, Columbus, plans a food institute with a huge surprise package to be brought on stage. This proves to be a C. P. range, and within it are small surprise packages—which will turn out to be the 22 points!

Milwaukee had five classes on the C. P. range with 3500 people in attendance and a special demonstration for home economics teachers.

Queens Borough Gas and Electric features low-temperature cookery and uses the thermometers to prove that the kitchen is cooler.

Grand Rapids Gas Light Co. is featuring C. P. ranges on its cooking school of the air and is presenting a C. P. skit for women's clubs.

Public Service of New Jersey is using the C. P. story in all its activities, which are so numerous they deserve a talk of their own.

It would seem that all over the country home service departments are focussing their attention on C. P. ranges, selecting recipes that will best illustrate their features, using slogans to emphasize the story (we thought we were good because we have one on each recipe sheet, but we find that Rochester has one under each recipe!). We have changed our directions for preheating time for cakes to read six instead of 15 minutes and for preheating the broiler we now suggest six instead of the former 10 minutes.

The appearance of the C. P. range has made our district sales managers more eager than ever for prospect demonstrations and they furnish us with so many names that we wonder where we are going to put the people. The C. P. range is a "natural" for theater cooking schools and similar activities. In regular and special demonstrations, for purchasers' and prospects' demonstrations, for individual instruction and for any other phase of home service activity it has brought a freshness of viewpoint that is revitalizing our whole program.

■ ■

Elizabeth Sweeney Joins Syracuse University Staff

ELIZABETH SWEENEY, Empire Gas and Electric Co., Geneva, N. Y., has resigned as head of home service work to accept a position as instructor in household technology at Syracuse University, Syracuse, N. Y.

E. SWEENEY

At the university Miss Sweeney will conduct a course in home economics, emphasizing home service for girls training for business positions. She will also assist Mrs. Prudence Connor, head of the household technology department, in the study of gas as a fuel and its use for domestic purposes, which is part of a course in equipment.

Miss Sweeney for a number of year was a member of the home service committee of the A. G. A., serving as chairman in 1937.

■ ■

Hodge Resigns as Service Corporation's Sales Head

William H. Hodge, formerly vice-president and manager, sales and advertising division of Public Utility Engineering and Service Corp. and associated with that company and its predecessor organizations in the Standard Gas and Electric Company system for the past 28 years, has resigned effective December 31, 1938.

Mr. Hodge will open an office in the Civic Opera Building in Chicago on January 1, 1939, for private practice as a counsel on public utility commercial and advertising services.

C. P. Range demonstrations were held by the home service department of the Portland Gas and Coke Co., Portland, Ore., for both company employees and the buying public.

C. P. on the Pacific Coast

(Continued from Page 29)

dule was even more effective as a result of frequent dealer tie-in.

"C. P. ranges were featured at the Jessie DeBoth cooking school, which was sponsored by the daily *Oregonian* and which attracted more than 25,000 enthusiastic Portland housewives. Miss DeBoth not only used a C. P. range, but 'plugged' it at each session. Also, a C. P. range was first prize in a drawing sponsored 'on the side' by the Independent Grocers & Meat Dealers, who gave said range no little publicity by means of more than 50,000 handbills given out by members.

"A little yellow pamphlet entitled 'How Much Do You Know About the C. P. Range?' was issued to all members of our own organization as well as to dealer salesmen. C. P. was also emphasized in regular bulletins to employees from time to time. Copies of a leaflet were given to the home service departments of the three local newspapers for distribution via their literature racks.

"In addition to special compensation, interest of salesmen was stimulated by means of a C. P. sales talk or presentation contest which was described on a special bulletin. Dealer interest was aroused at a well attended dinner meeting sponsored by the Gas Appliance Society of Oregon. Special C. P. talks and stunts were featured and the entire campaign presented.

"C. P. was featured in a majority of the pictures in the current issue of *Tempo*, a new 'pictorial' which our company launched this year. This goes to 80,000 customers.

"Continuous afternoon demonstrations were held on our sales floor for several weeks during the campaign, with attendance stimulated by three girls on telephones and letters to the home addresses of all members of our organization.

"Clippings from newspapers which featured C. P. were mounted and distributed to our salesmen, along with special bulletins of our own.

"Local radio publicity included a 'spot' tie-in with the Mystery Chef and some mighty fine work on the part of gas appliance dealers who sponsor special forenoon shopping programs of their own.

"Colorful bill stickers and truck banners, also billboards, served to still further keep C. P. before the public.

"Our windows and those of many dealers featured C. P. ranges throughout the campaign—all of our eight windows at one time being used exclusively for this purpose. Our sales floor also played a big part in the C. P. promotion, a range being suspended in a conspicuous spot above the cashiers. Colored and changing spotlights, as well as colorful pennants, added to the general effectiveness."

The Domestic Range Committee of the A. G. A. and the Range Manufacturers Division of the A. G. A. E. M., functioning for 1939, are laying plans for an extension of the C. P. promotion during the new year, it is learned from A. F. Rice in Los Angeles. Varied campaigns and programs will be conducted, and it is felt that with the experience of the well organized effort in 1938, the results of 1939 will more than justify the activity.

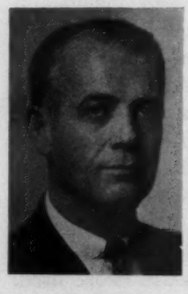
Northern Indiana Power Names Stark Comptroller; Goris Joins Gary Co.

ANNOUNCEMENT has been made by L. B. Schiesz, president of the Northern Indiana Power Co., Indianapolis, Ind., of the election of Paul Stark of Indianapolis, as comptroller of the company. Mr. Stark succeeds C. W. Goris, who recently was elected vice president and general manager of the Gary Heat, Light and Water Co. Mr. Stark assumed his new duties Dec. 1.

Mr. Stark's first utility employment was in 1912 with the Indianapolis Water Co. Four years later he accepted an appointment with the Indiana Public Service Commission as a traveling auditor, leaving that post in 1918 to become general auditor of the Eastern Wisconsin Electric Co. at Sheboygan, Wis. In 1920 he became associated with the Wisconsin-Minnesota Light and Power Co. at Eau Claire, Wis.

Three years later, in 1923, Mr. Stark returned to Indianapolis as general auditor of the Central Indiana Power Co. subsidiaries, which included the Northern Indiana Power Co. In 1929 he was transferred to the Public Service Co. of Indiana.

Mr. Goris likewise has had long experience



PAUL STARK

C. W. GORIS

in the utility field, having first been employed in 1915 by the utility properties in Lafayette which now are part of the Public Service Company of Indiana. In 1924 he became chief clerk of the utility company operating in Fort Wayne, and four years later was employed by the Midland United Co., the holding company for operating properties in Indiana.

In going to the Gary company, Mr. Goris will fill the vacancy caused by the death last August of A. V. Grief.

Natural Gas Section Moves Headquarters to New York

THE Managing Committee of the Natural Gas Section, American Gas Association, has announced the removal of the Section headquarters from Dallas, Texas, to New York City, effective January 1, 1939.

E. H. POE

E. H. Poe, secretary of the Section, will remain in charge of all natural gas activities, and will continue to contact the natural gas industry throughout the United States from his new headquarters, where all other sections of the American Gas Association are located.

It is expected that the consolidation of the two offices will affect a greater ease of cooperation among the various other sections of the association in the advancement of the industry's programs and enable the natural gas industry to be better and more completely serviced by the association.

The nation-wide programs and activities of the American Gas Association can be more closely tied-in with the natural gas industry's needs.

■ ■

Portland Gas and Coke Co. Makes Personnel Changes

James T. Veatch and Leslie E. Thomson were recently advanced to new positions in the Portland Gas and Coke Co., Portland, Ore., according to an announcement by R. G. Barnett, vice-president and general manager. Mr. Veatch, district agent at Newberg for the past four years, was named district agent at Albany, replacing David Gowans. Mr. Thomson, office manager and salesman at Oregon City since 1936, was made Newberg district agent to replace Mr. Veatch.

In the commercial department of the Portland Co. three other changes were made. J. F. Mooney, sales representative, was appointed assistant service engineer in the Utilization Bureau, specializing in commercial service work; and F. C. Cone and Ira J. Doyle were transferred from the Portland commercial department to the Vancouver district as sales representatives.

■ ■

Appliances Will Talk In Novel Demonstration Home

An all-gas, talking home exposition will be opened early in January in a home in Riverside Terrace, Houston, Texas, according to an announcement in the *Houston Chronicle*. The talking home is sponsored by several Houston firms: Borden Construction Co.; Guardian Trust Co., developers of Riverside Terrace; Houston Gas and Fuel Division of United Gas Corp.; Stowers' Furniture Co., and other firms interested in home building materials and furnishings.

The home will feature furniture, appliances, and building materials that "talk" to the visitors on inspection tours by means of hidden sound apparatus. Each article of furniture, the floors, the materials used in the exterior, and the appliances representing the four major gas services will explain their own essential points.

The home was designed and built by E. H. Borden, president of the Borden Construction Co.

■ ■

L. T. Potter Named Chief of Lone Star Production

L. T. POTTER, assistant production engineer for the Lone Star Gas Co., Dallas, Texas, has been appointed to succeed J. H. Dunn in charge of the company's production engineering department. Mr. Dunn, formerly chief production engineer, resigned December 1, 1938, to become general manager of the Shamrock Oil and Gas Corp., with headquarters in Amarillo, Texas.

Mr. Potter joined Lone Star, June 6, 1928, following his graduation from Texas A. & M. College, where he received his degree in mechanical engineering. His first assignment for the company was that of syphon inspector in the gas measuring department, and he spent most of his time in the field in connection with the operation of gas wells until September 1, 1931. At that time he was transferred to Dallas and appointed assistant production engineer.

Mr. Dunn had been with Lone Star since Jan. 11, 1926, when he entered the gas measurement department, six months after his graduation from Texas A. & M. College. He became meter inspector in the Ranger area, later was appointed assistant gas measurement superintendent and in 1928 was appointed chief production engineer.

■ ■

P. G. and E. Signs Contract To Supply Lincoln, Calif.

The Pacific Gas and Electric Co. has recently signed a contract with the Gladding, McBean & Co. for supplying natural gas to the plant in Lincoln, Calif. Gas will be piped from the Pacific Gas and Electric Co.'s wells near Marysville, and according to estimates, will be served about April 1.

The Railroad Commission recently authorized the Pacific Gas and Electric Co. to serve natural gas from the Rio Vista field to customers in the Vallejo-Benecia, Calif., area during the winter months in place of gas from the southern California fields. This arrangement is made because of the inadequacy of transmission lines from the southern fields, resulting in an insufficient supply of gas to meet the demands of the 8,500 customers during the peak months. A slight rate reduction will be in effect during the period Rio Vista gas is used.

■ ■

A.G.A. Conference To Be In San Francisco In May

The Executive Board of the American Gas Association has selected San Francisco as the meeting place of the Association's executive conference, according to announcement made by the Association from its headquarters in New York. The conference will be held around the middle of May, although definite dates have not been determined. Delegates who attend the conference will have an opportunity to visit the Golden Gate International Exposition.

O. L. Moore, So. Calif. Gas Executive, Retires Jan. 1

RETIREMENT of Oscar L. Moore, manager of the customers department of the Southern California Gas Co., Los Angeles, effective January 1, 1939, because of his health, was announced today. Mr. Moore has been affiliated with the Southern California Gas organization since its merger in 1937 with the Los Angeles Gas and Electric Corp., of which he was a member for 23 years.

Starting his employment in September, 1904, he rose from the position of a telephone clerk to that of clerk in the auditor's office, chief clerk, assistant auditor and auditor, to manager of the customers department in 1925. He retained this position after the merger of the Los Angeles company with Southern California Gas.

H. E. Davidson, now assistant manager of the customers department, will succeed Mr. Moore. He has a record of 16 years service with the Southern California Gas Co. After holding various positions in the sales department, including those of superintendent of appliance sales, general supervisor of domestic sales and sales promotion engineer, he became assistant general superintendent of the customers department in June, 1936, and at the time of the merger in 1937 he became assistant manager of the customers department.

The work of Mr. Davidson's present office will be carried on by members of the staff of the department.

■ ■

C. O. Diller Appointed To New Position With Lone Star

Julian L. Foster, general superintendent and chief engineer of the Lone Star Gas Co., Dallas, has announced the appointment of C. O. Diller as telephone superintendent, effective November 10. Mr. Diller fills the position held by Grover C. Reed who died November 1 from injuries resulting from an automobile accident.

Prior to his appointment as telephone superintendent, Mr. Diller was chief draftsman in the company's engineering department, having served in that department since joining the company in 1926. In addition to his new duties Mr. Diller will continue as chief draftsman.

■ ■

P.C.G.A. Revises Data Book For Architects, Builders

Pacific Coast Gas Association has had a committee working for some time under the chairmanship of Frank Moon of Southern California Gas Co., on a revision of its *Data Book On Gas Fuel*, a booklet prepared for gas company distribution to architects and builders.

Mr. Moon has completed the editorial work in connection with the new manuscript and the book will go to the printers in the near future.

■ ■

Frank E. Boehme Dies

Frank E. Boehme, chief engineer of the Portland (Ore.) Gas and Coke Co.'s plant and oldest active member of the organization, died October 16 after a brief illness. He had been with the company 42 years.

1939 OPPORTUNITY:

HOW TO WIN PROSPECTS AND MAKE SALES FOR GAS AND GAS SERVICE . . .

DURING 1939, more and more people are going to be reading and hearing about gas refrigeration . . . in magazines, over the air, and at the World's Fairs.

Your opportunity lies in the growing interest in gas and the almost unprecedented chance it gives you to win new customers, increase your load and revenue, and build greater sales of gas appliances.

FINER PRODUCT THAN EVER

This year, the gas refrigerator is even finer than before . . . offers your prospects more . . . gives you an edge on the market for making greater refrigeration sales.

Servel designers have added a new note of modernity to its already beautiful cabinet . . . the engineers have stepped up its noted efficiency, yet prices are lower!

To help *you* win prospects and make sales, Servel is backing its product with an outstanding national magazine campaign in which more than 46 million messages will reach U.S. readers.

A great radio tie-in program, with coast-to-coast hook-ups for the U.S. and Canada, will reach millions of radio listeners . . . and *two* World's Fair exhibits, in New York and San Francisco, will interest millions of visitors in the story of gas refrigeration.

Finally, to help dealers and their salesmen tie in with the national advertising, Servel offers a host of highly dramatic and effective local advertising and sales promotion materials.

MAKE YOUR PLANS NOW

To make the most of your opportunity in 1939 . . . plan now to get your full share of sales and profits. Remember: every gas refrigerator in your customers' homes demonstrates the modernity of gas and gas service! Servel, Inc., Evansville, Ind.

SERVEL ELECTROLUX

Now offering

GREATER EFFICIENCY
• • •
NEW, MODERN BEAUTY
• • •
LOWER PRICES

and backed by

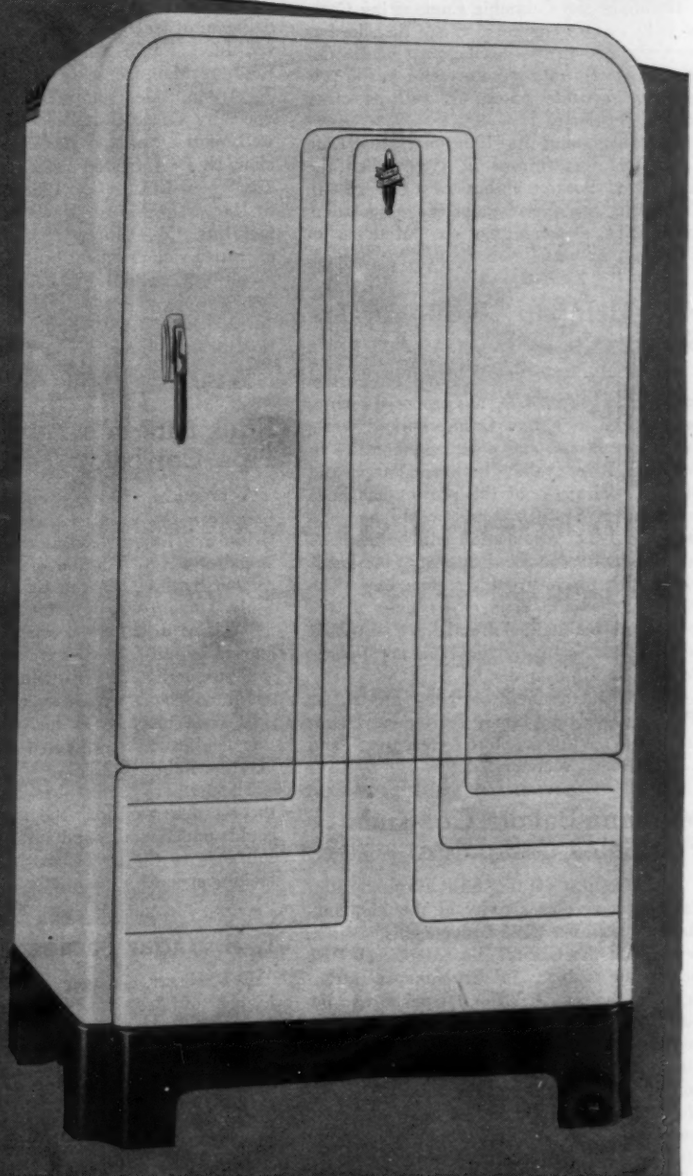
Outstanding National Advertising, including:

MAGAZINE CAMPAIGN
RADIO TIE-IN PROGRAM
2 WORLD'S FAIR EXHIBITS

plus:

DRAMATIC PROMOTION MATERIALS

The New 1939
SERVEL
ELECTROLUX
Gas Refrigerator



C. F. de Mey is Chairman of A.G.A. Rate Committee

APPOINTMENT of C. F. deMey, rate engineer of the Columbia Engineering Corp., Columbus, Ohio, as chairman of the Rate Committee of the American Gas Association, has been announced by Conrad N. Lauer, president of the Association. Wide experience in the development of rate structures and the presentation of rate cases qualify Mr. deMey for this post.

C. F. DEMEY

Mr. deMey made his debut in the utility business with the Louisville Gas and Electric Co. He was later employed by the Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y. He graduated from the University of Kentucky in mechanical engineering.

He joined the Columbia Engineering Corp. in 1929 as rate engineer. Since then he has been engaged in the development of the Columbia System rate structure and in the presentation of rate cases, as well as other related problems.

Now beginning its 19th year, the Rate Committee was formed in 1920, when the Executive Board authorized George B. Cortelyou, then president of the Association, to appoint a committee on "Methods of Charging for Gas."

■ ■

New Company Proposes Gas Service in N. Dakota Area

The newly organized North Dakota Consumer Gas Co., Fargo, N. D., has proposed serving natural gas to Fargo, Grand Forks, N. D., Crookston, Minn., and other communities in the Red River valley between Fargo and Bismark. The cost of the project has been estimated at $4,250,000 and would be completed in 1939. Application will be made to the Reconstruction Finance Corp. for funds with which to construct the pipe line. The company plans to connect its lines to the feeder line maintained from the Baker field to Mandan, N. D., by the Montana Dakota Power Co., Minneapolis.

Officers of the new company are R. R. Wolfer, president; James P. Kennedy, vice-president; William Stern, treasurer; and A. L. Netcher, secretary.

■ ■

Montana-Dakota Co. Ends Fall Sales Campaign

Final results of the Fall Harvest Sales Campaign, a sales activity of the Montana-Dakota Utilities Co., Minneapolis, Minn., reveal that the Great Falls (Montana) Division of the company, under Manager Harlan Scott, is the winner. The campaign was begun August 15 and concluded November 26, being carried on under the direction of W. L. Hayes, new business manager. Goal of the competing divisions is the winning of the Heskett Trophy, which has been presented each year since 1932 in honor of General Manager R. M. Heskett.

Total sales of gas appliances for the campaign are as follows: 203 conversion burners, 88 furnaces, 11 boilers, 84 unit heaters, 243 floor furnaces, 684 circulating heaters, 666 gas ranges, 365 gas water heaters, 441 radiant heaters, and 73 gas refrigerators.

Each appliance sale during the Harvest Campaign was valued at so many "bushels" of wheat. The winning division amassed a total of 5,064 "bushels." Employees were kept in contact with the campaign weekly through a company publication, *Straws*.

■ ■

Guyer Appoints A.G.A.E.M. Program Committee

E. R. GUYER, of Chicago, president of the Association of Gas Appliance and Equipment Manufacturers, has appointed a program committee to draw up plans for the association's annual convention to be held at the Roosevelt Hotel, New York, May 24 to 26 (1939). Lucian Kahn, of the Estate Stove Co., Hamilton, Ohio, has been named chairman of the committee.

Serving on this planning group are: F. E. Sellman, of New York, vice president of Servel, Inc.; E. C. Adams, president, Adams Brothers Manufacturing Co., Pittsburgh; T. T. Arden, sales manager, Milwaukee Gas Specialty Co., Milwaukee, Wis.; R. L. Clewell, of the National Radiator Corp., Montclair, N. J.; J. Scott Fowler, president, Lovekin Water Heater Co., Philadelphia; Philip S. Harper, president, Harper-Wyman Manufacturing Co., Chicago; Merrill N. Davis, executive vice president, S. R. Dresser Manufacturing Co., Bradford, Pa.; W. P. Hutchinson, president, Sprague Meter Co., Bridgeport, Conn.; W. P. Smith, vice president, Continental Water Heater Co., Los Angeles, Calif.

■ ■

Erick Larson is Author of Pipe Corrosion Textbook

A practical treatise, *Pipe Corrosion and Coatings*, by Erick Larson of Stevenson, Griest and Larson, consulting engineers, 270 Broadway, New York, was published in December by the American Gas Journal.

Mr. Larson, who is a former chairman of the A.G.A. distribution committee, and well known in utility circles as an authority on gas production and distribution, has written in his book a treatise completely practical from his own extensive experience in this field, and incorporated in it the latest data available.

The author's object has been to explain theory in a way that the average operator could understand; and to offer workable solutions to the problems that arise in the maintenance of pipe lines.

■ ■

E. B. Hagar Passes

E. B. Hagar, manager of the San Francisco branch of Arco Co. of California, passed away at his home in San Francisco from a heart attack on December 11, at the age of 57.

Mr. Hagar was well known in industry circles on the coast, having been in the employ of the Arco Co. for more than 20 years. For the past 15 years he has been in San Francisco.

A. J. Hartfield, Pacific Gas Radiator Head, Is Drowned

A. J. HARTFIELD, 63, president and founder of the Pacific Gas Radiator Co., 1740 W. Washington Blvd., Los Angeles, Calif., was drowned January 2 in Big Bear Lake when the ice broke beneath him while skating. Mr. Hartfield was the first manufacturer of gas heating appliances on the Pacific Coast.

A. J. HARTFIELD

Born in Germany, Mr. Hartfield came to this country at the age of five, living in Detroit for many years. After considerable experience and training in the hardware business, he began manufacturing his own sheet metal and coal burning stoves, and later developed a gas burner to save more heat. In 1913 he founded the Pacific Gas Radiator Co., building his own factory and foundry in Huntington Park in 1918 for the manufacture of gas steam radiators. Mr. Hartfield was a member of the Pacific Coast Gas Association, and was prominent in civic activities in Huntington Park.

Last year Mr. Hartfield inaugurated the policy of dividing the company's profits among all members of the Pacific Gas Radiator organization.

■ ■

Program for P. U. A. A. Conference Announced

The first Western Regional Conference of the Public Utilities Advertising Association will be held January 31 at the Muehlebach Hotel in Kansas City, Mo.

The welcoming address will be given by Major T. J. Strickler, Kansas City Gas Co., Kansas City, Mo. William H. Hodge, Public Utilities Engineering and Service Corp., Chicago; Jay C. Barnes, New Orleans (La.) Public Service, Inc.; Howard F. Weeks, Consolidated Edison Co. of N. Y., Inc., and president of the Association; W. C. Grant, Lone Star Gas Co., Dallas, Texas; and Frank Jamison, Public Service Co. of Colo., Denver, will present papers at the meetings. Symposia will be led by Kenneth Magers, Cincinnati (Ohio) Gas and Electric Co., and J. R. Pershall, Public Service Co. of Northern Illinois, Chicago.

■ ■

Saskatoon, Can., May Get $5,000,000 Gas System

The city of Saskatoon, Saskatchewan, Canada, has granted to Walter F. Thorn and associates exclusive right to build and operate a natural gas transmission line and distribution system for the city. The transaction is subject to approval by the local government and ratepayers of Saskatchewan.

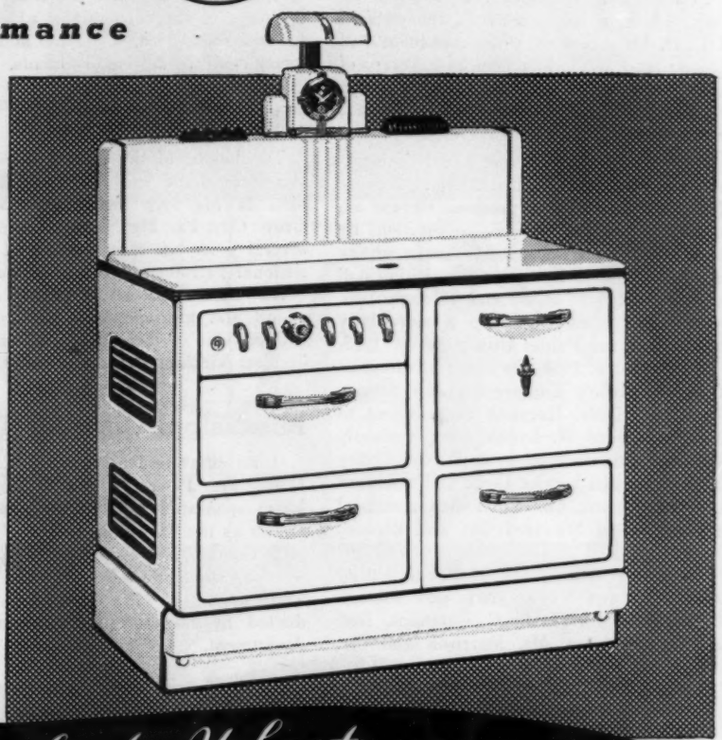
A bond of $200,000 is being given by the Thorn company covering their ultimate outlay of approximately $5,000,000 for transmission and distribution. Mr. Thorn and associates also plan to spend $200,000 drilling for gas in the Lloydminster and Unity areas, Saskatchewan, where they control potential gas fields.

WEDGEWOOD CP RANGES

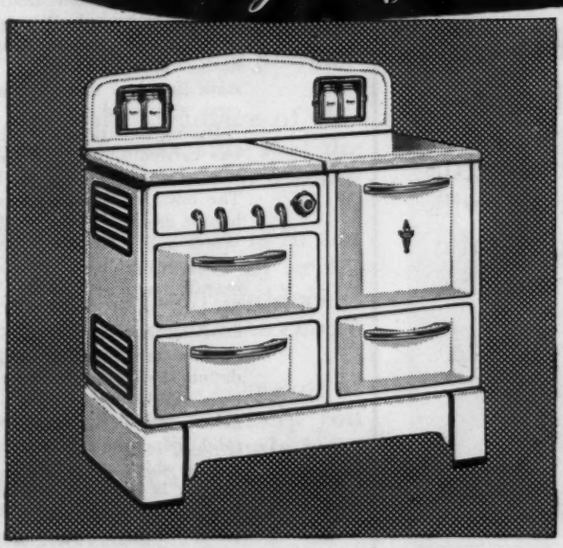
...certified performance

with Built-In Gas Circulating Heater

more than just a gas range!



It cooks your food - It heats your rooms!



MODELS 2045F CT—2085F OT

De Luxe Certified Performance
MODELS 4285 OT—4245 CT

Here is the type of range every woman has long wanted. Actually two ranges in one—combining the beauty of a table-top range with the unequalled utility and convenience of a Built-in Gas Circulating Heater. The distinctive styling, beauty of line and appointments will challenge comparison for years to come.

ONLY WEDGEWOOD HAS ALL OF THESE OUTSTANDING FEATURES

- **BUILT-IN GAS CIRCULATING HEATER**
- **HIGH-SPEED LOW-TEMPERATURE OVEN**
- **SUPER-SPEED GIANT BURNER**
- **IMPROVED ASTO-GRIL BROILER**
- **SPEED-PLUS-SIMMER BURNERS**
- **ALL BURNERS SELF-LIGHTING**

JAMES GRAHAM MANUFACTURING CO.
San Francisco • Los Angeles • Newark
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OVER A MILLION SATISFIED USERS

OVER ONE MILLION SATISFIED WEDGEWOOD USERS

Gas THE MODERN FUEL

Public Utility Engineering and Service Corp. Directorate is Reorganized

WILLIAM J. HAGENAH, president of Public Utility Engineering and Service Corp., Chicago, has announced the election of E. D. Uhlendorf as a vice president and director, and M. A. Morrison as secretary of the corporation. It was also announced that the board of directors of the corporation has been reduced from 14 to five members.

The reorganization of the board of directors, according to Mr. Hagenah, is because of negotiations now in progress for the reacquisition of the service corporation by Standard Gas and Electric Co. as a wholly owned subsidiary. By such reacquisition it is believed Standard Gas and Electric Co. would be in a better position to more fully comply with the Public Utility Act of 1935.

On October 5, 1938, the board of directors of Public Utility Engineering and Service Corp. elected Mr. Hagenah as president to succeed Bernard W. Lynch, who previously had been president of both Public Utility Engineering and Service Corp. and Standard Gas and Electric Co. Mr. Lynch remained as president of Standard Gas and Electric Co.

The board of directors of Public Utility Engineering and Service Corp. now consists of Mr. Hagenah, Henry C. Cummins, Bernard F. Braheney, Mr. Morrison and Mr. Uhlendorf. Mr. Uhlendorf has been executive engineer and Mr. Morrison has been treasurer of the corporation, which position he will retain. Mr. Cummins and Mr. Braheney continue as vice presidents.

■ ■

Oldest Gas Man Dies

The holder of the title, "Oldest Oil and Gas Man in the World," E. Hamilton Sloan, died in his 94th year, November 28, at Grove City, Pa. Mr. Sloan acquired the title several years ago at a meeting of the International Petroleum Institute in Tulsa.

He was well known during the early days of oil and gas operation in Pennsylvania, and was one of the pioneers of the industry in West Virginia, Kansas and Oklahoma.

■ ■

Mississippi Co. Aids Dealers

In an effort to build up dealer sales, the Mississippi Power & Light Co., Jackson, Miss., sponsored a series of demonstrations known as the "Hospitality House" on dealer and company sales floors throughout its territory from December 5 to 24. The shows were staged in key cities, and were conducted by members of the home service department.

HERE IT IS . . .

The New Way to a BIGGER Water Heater Volume

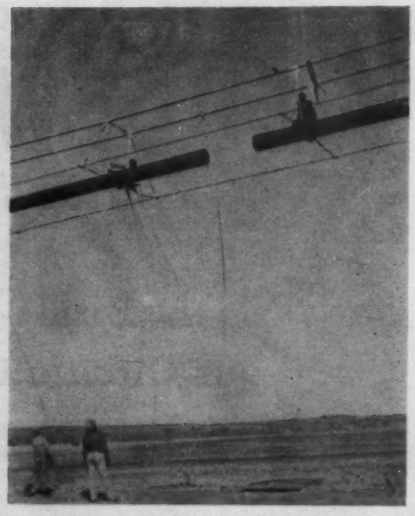
The EYE APPEAL Campaign. Complete in every detail, will help you sell more Automatic Gas Water Heaters of any make.

Send for details and samples of

SALES MAKER
SALES PLANNER
and
SALES FINDERS

A complete line of new models, Laboratory Tested and Approved. A heater to supply every conceivable Hot Water demand.

PITTSBURG
WATER HEATER CORP.
PITTSBURGH, PA.



Completion of work on the new 1,000-ft. Lone Star Gas Co. pipe line bridge across Salt Fork of the Red River near Hollis, Okla., was only a matter of hours as this photograph was taken showing the two 300-ft. sections of 18-in. pipe being brought together in the middle of the bridge in preparation for welding.

Lone Star Completes Salt Fork Pipe Line Bridge

COMPLETION in December of Lone Star Gas Co.'s new suspension cable bridge over Salt Fork of the Red River 12 miles north of Hollis, Oklahoma, makes a total of six major pipe line bridges carrying this company's main lines over treacherous rivers.

The new bridge was constructed after a severe spring flood destroyed the 480-ft. concrete and wood piling bridge at this point when debris from railroad and highway bridges crashed against it, pulling the 18-in. main line into the river and battering concrete and wood pilings.

During construction of the new bridge, gas was carried across the river through a 6-in. steel welded line buried in the river bed. The line transmits gas from the Texas Panhandle gas field south to Hollis, Dallas, Fort Worth and intervening cities and towns.

The bridge has a span of 600 ft., with an overall length of 1,000 ft. The new line will be held 16 ft. above the highest recorded flood level, at this point in the river. Two months were required to sink the four foundation shafts for the towers and the "sand hogs" worked in caissons 51 ft. underground at one end of the bridge, in their quest for solid foundation. The two main suspension cables which carry weight of the pipe are 1⅝ in. in diameter and are double galvanized against corrosion.

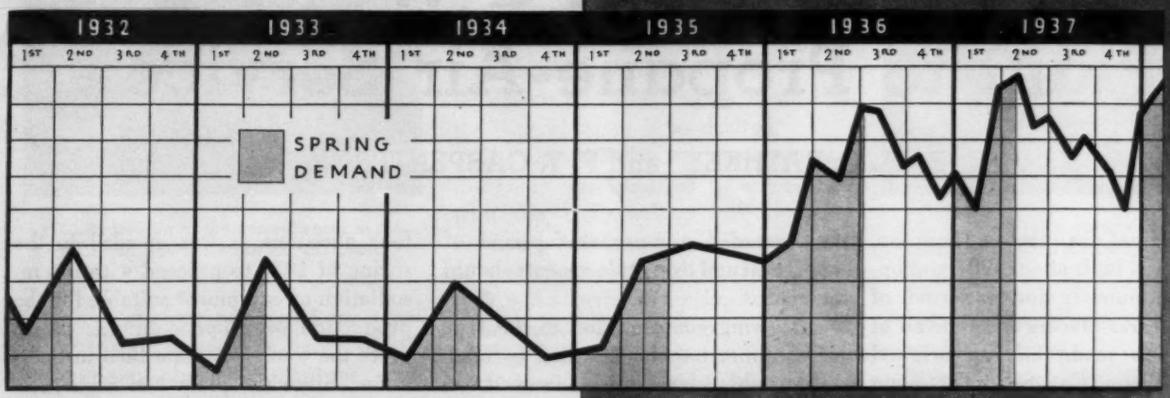
■ ■

So. Union Builds Line

The Southern Union Gas Co., Dallas, Texas, has constructed a 20-mile, six-in. pipe line from the Tomball gas field in northern Harris County to the company's South Texas system. Field work for the line was carried on under the direction of E. H. Newman, of the engineering department. It was expected that the line would be in operation by January 1, 1939.

Building History Repeats Itself Each Spring!

Chart of national building permits is based on data from the U. S. Dep't of Labor taken from 1450 cities with over 2,500 population.



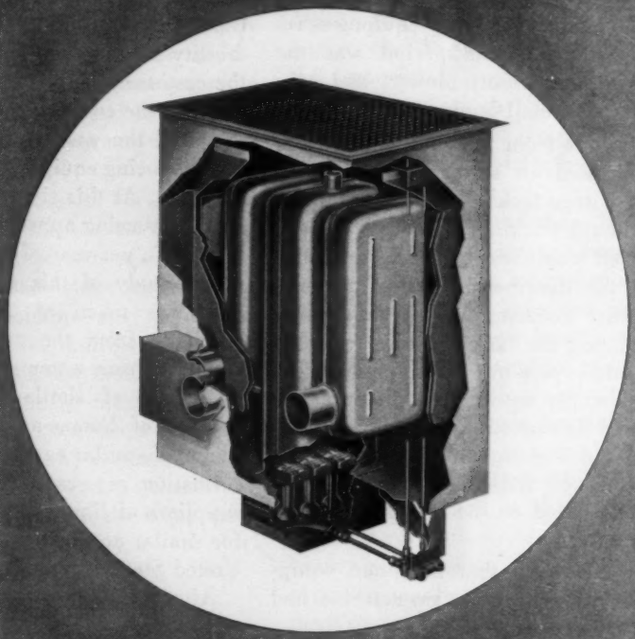
. . . AND TURNS THE SPOTLIGHT ON . . . PAYNEHEAT

The annual Spring building peak is your opportunity to create a new and permanent gas load.

Plan now to take full advantage of this intensified demand—make sure that the furnaces you handle are your *best salesmen for gas.*

Again, this Spring, Payneheat is in the spotlight. It will be specified by architects, by contractors, by home-builders—because Payneheat has become *the choice of experience.*

Payne gives you the finest in *every* type of gas-fired furnace. Payne will help you sell gas because there isn't a single heating requirement that Payneheat can't meet. When you carry the Payne line you're way out in front.



PAYNE FLOOR FURNACE. The most efficient, economical and popular floor furnace ever built. Fully vented, it provides an abundance of fresh, pure circulating air at low installation and operating cost. It requires no basement.

Other famous furnaces in the Payne line: Console Heaters, Forced Air Units, Model "A" (Unit) Furnaces and Modernair Blower Cabinets, Beverlyair Units, Duplex, Single and Triplex Registers, Suspended Furnaces and Commercial Blower Units. All A.G.A. approved.

Payne

FURNACE & SUPPLY CO., INC.
BEVERLY HILLS, CALIFORNIA

BUTANE-PROPANE News

The Conversion of a Water Gas Plant to Propane-Air Service

By A. C. RATHKEY* and F. T. CARPENTER†

THE original gas plant in Hampton, Iowa, was built about 1907 and operated continuously for a period of about 30 years. During this time all of the gas was made on the original Springer Water Gas Set. The plant had never been provided with standby equipment, and the only equipment replaced during this period was the boiler, compressor, blower, and miscellaneous small pumps.

The gas from the Springer set was compressed for storage in high pressure storage tanks designed for 80 lbs. maximum working pressure. The gas was fed from these high pressure tanks into the distribution system through pressure reducing valves capable of regulating the tank pressure to a distribution pressure of approximately five lbs. per sq. in. This pressure was carried throughout the distribution system and was again reduced to four oz. through individual house regulators installed on the premises of each customer.

It is evident that the plant equipment, particularly the gas machine, had far exceeded a reasonable period of operation and that replacements should be made.

In giving consideration to the type of equipment to be installed to rehabilitate this plant, it was necessary to take into consideration the amount of capital expenditure required, the adaptability of the fuel for utilization in the customers' appliances connected to the line, the cost of producing finished gas, and the cost of maintaining the gas-producing equipment over a period of years. At this time there were 580 customers using approximately 12 million cu. ft. per year. In making an economic study of this problem, advantage was taken of the information available from the company records resulting from water gas operation on properties of similar size, company records of butane-air gas producing plants of similar capacity, and such information as was available from the suppliers of liquefied petroleum gases for similar applications throughout the United States.

After taking into consideration these four questions, it was decided in the spring of 1937 to proceed with the installation of equipment suitable for the production of propane-air gas to replace the water gas plant then in operation. Since the plant had high pressure gas storage, it was decided to use propane-air gas in the winter time in order to have a sufficiently low dewpoint of the finished product to eliminate the possible condensation of vapors during the extreme cold weather and the resulting B. t. u. loss. Suitable equipment for the unloading, handling and storing of liquid propane was installed in accordance with the National Board of Fire Underwriters' regulations.

In making a study of the space available for installing gas mixing and compression equipment, first consideration was given to space available in the existing gas plant. After installation of the necessary equipment for the production and storage of propane-air gas and all the obsolete equipment had been removed, there would be available more space than needed, yet insurance and taxes would have to be paid on this useless space. Maintenance on the 30-year-old building would also be excessive. It was, therefore, decided that a new building would best serve all purposes. Fig. 1 shows this building.

In selecting the equipment to be used in proportioning the gas and air and compressing the mixture for storage, consideration was given to the fact that the company had available certain idle equipment which had been previously

FIG. 1. New building at Hampton, Iowa, designed to house equipment for the production and storage of butane-air gas.

*Div. Gas Engineer, Iowa Public Service Co.
†Philgas Department, Phillips Petroleum Co.

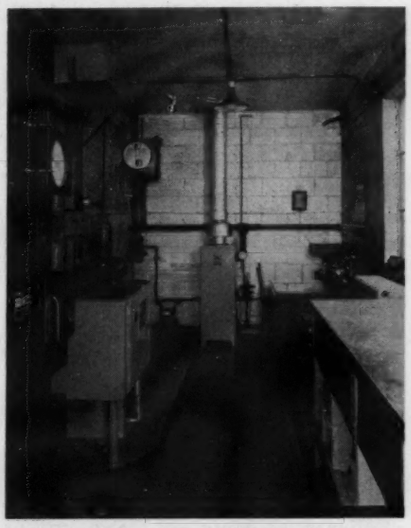


FIG. 2. Interior of the control room at the Hampton, Iowa, butane-air gas plant.

used for enriching purchased gas in another plant. It was the desire of the management that this plant be completely automatic in operation in order to eliminate all possible labor costs. Due to the fact that there was only a slight difference between the cost of butane and propane, and the fact that butane would be usable only about one-half the year, it was decided to operate all the time on propane vapor and thus eliminate the necessity of a heat exchanger and appurtenances necessary to vaporize butane. A suitable compressor capable of compressing approximately 5000 cu. ft. per hour and equipped with Class I, Group D explosion-proof motor was installed. This compressing unit is controlled by an adjustable pressure switch which starts and stops the compressor at predetermined pressure limits.

The compressor cylinder is cooled by means of a radiator, fan, and pump. Both the fan and pump are driven by a belt and pulley installed on the end of the compressor crankshaft.

For controlling the gas-air ratio, there was installed a Calorimixer unit which, as mentioned before, had been used in another plant. This unit controls the percentage of air and propane in the mixture and also shuts down the compressor if the heating value of the gas should vary above or below predetermined limits. This unit was installed in the control room together with other necessary switches and relays for automatic plant operation. A suitable gas-fired hot water boiler was installed in the control room for maintaining temperatures sufficient to prevent freezing in both the control room and the compressor room. Ample space was provided in the control room for a desk and a small work bench for minor repairs to customer and plant equipment. The interior of the control room is shown in Fig. 2.

The plant equipment is arranged so that a second compressor may be installed without building or plant alterations. The location provided for the second compressor is such that it may be driven by a gas engine located in the control room if so desired.

The equipment in the gas compressing room was installed in accordance with the Underwriters' requirements for hazardous locations. The pressure of the propane vapor in the storage tank is first reduced by duplicate regulators installed on the top of the liquid storage tank. This vapor at a pressure of 20 lbs. is piped into the compressor room where the pressure is reduced to approximately 2½ lbs. and then finally to approximately zero before admission into the proportioning valve in order that the vapor and the air will be at the same pressure as they enter the mixing chamber.

A vacuum operated back pressure check valve which is opened by the suction of the compressor was installed between the second stage and zero regulator. A solenoid operated globe valve which is energized and deenergized simultaneously with the motor of the gas compressor was also installed in this line. All of these regulators were provided with suitable by-passes to be used in case of emergency. A portion of the equipment installed in the compressor room is shown in Fig. 3.

Pulsation Eliminated

The mixed gas and air passes through a surge tank to eliminate pulsation on the mixing valve, then through the compressor and is discharged into the high pressure gas storage tanks which were used in connection with the former water gas plant. Incidentally, the gas storage tanks are the only old equipment used in the new plant. Send-out gas from the high pressure storage tanks passes through a station regulator which reduced the tank pressure to approximately five lbs. and then through a station meter which is provided with mechanism to correct volumes for pressure.

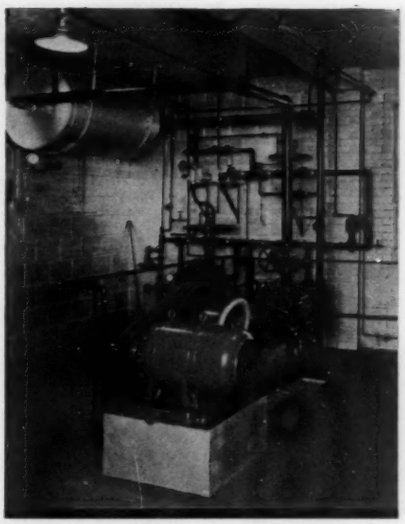


FIG. 3. View of a portion of the equipment installed in the compressor room.

Signal bells are installed at the plant and also at the local service man's residence. These bells ring if there is an interruption in the electric service, if the compressor is shut down by the "calorimixer," if the propane vapor pressure is low, or if the gas pressure in the storage tanks falls below an established minimum.

A survey of the appliances installed on the customer's premises was made and a suitable report for recording this information was worked out in conjunction with persons having experience on similar conversion jobs. This survey was taken by local help and was found to be immensely helpful in the conversion of the customer's appliances to a satisfactory utilization of this new fuel, and at the same time caused the customer just as little inconvenience as possible. Ample space was provided on the report for listing of the material required in the conversion of each customer's appliances and the total of the material designated on each card provided information for the ordering of all equipment required. All the equipment required in the conversion of the customers' appliances was on hand previous to the introduction of the new gas. Names, addresses, and meter numbers were placed on these cards by the office to insure that no customer would be missed in the survey and conversion. Cards were segregated into streets and districts, the district to correspond with the valve in-

stallation in the distribution system as it was planned to introduce the new gas into the town by sections.

During the time of the survey, provision was made for the necessary conversion parts for the customers' appliances and for the necessary tools and tool kits for use by the workmen in the customers' homes. At the same time a crew of men was employed for the installation of the equipment in the new gas plant building. The work between these two crews was sufficiently coordinated so that the supervisor had available men competent to do the work on the customers' appliances, the material required for each customer's appliances, and the tools with which to do the work by the time the first car of liquid propane was received and unloaded into the liquid storage tank. Experienced men had been made available to instruct the company employees in the method and procedure in the unloading of this first car of propane, the starting and adjusting of the plant's mixing equipment, and to give instructions to the conversion crew in the procedure to be followed in the conversion of the appliances.

As stated before, it was the plan to introduce the new gas into the distribution system by sections, as only six conversion crews had been provided, and it was not the desire of the company to inconvenience customers for a period of longer than three days. After cutting in the third section, there were sufficient complaints in the office on the improper burning of gas appliances to indicate that the valves in the distribution system were not holding, or that an unknown "tie-in" in the distribution system existed, and the new propane-air gas was being fed to the entire city. This necessitated speeding the work of conversion and increasing the working hours of the conversion crews in order that the entire job could be given the first going over in approximately a week. This was done, so that by the end of this first week practically all the appliances in town were operating on efficiencies at least equal to the efficiencies formerly obtained. In most cases the efficiency was better than the efficiency obtained with the old gas. The conversion of the customers' appliances consisted of enlarging burner ports, application of velocity reducing spuds, and proper adjustment of air shutters.

This work was done in such a manner that, rather than causing inconvenience to the customer, it actually improved customer relations of the company, since a large number of the appliances were badly in need of cleaning and some of them were entirely out of adjustment. By the time the conversion work was over, every customer's appliances in town had been completely renovated and properly readjusted. Any appliance out of the ordinary was noted on the survey card before the conversion man left the shop in the morning, and if he had any question concerning the proper procedure on this appliance, he could ask the supervisor who was competent to convert any appliance attached to the distribution system. If, after receiving this instruction from the supervisor, the workman was still unable to obtain a proper adjustment on this particular appliance or burner, he was instructed to attach a red tag to the burner cock which informed the customer not to use this burner until the tag had been removed, make a notation on his survey card, and inform the supervisor that he was unable to make adjustment and request his assistance.

Special Calls

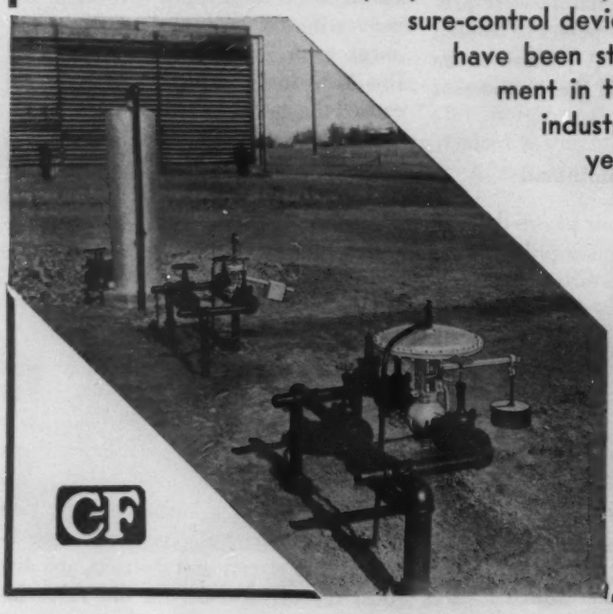
Such special calls as this were made by the supervisor at his earliest convenience. At the end of 10 days, all of the conversion men were discharged except two who were kept on for several more days to assist the supervisor in a recheck of all complaint calls. At the end of three weeks time the local company ran an advertisement in the newspaper requesting any customers to call the office if any of their appliances or burners were not giving 100 per cent satisfactory operation. The thoroughness of the conversion work can probably be best explained by saying that only three complaint calls came into the office as a result of this advertisement in the paper inviting such complaints.

By the end of the second day the plant had been placed in a satisfactory operating condition with the B. t. u. content held within five B. t. u.'s plus or minus and the unit starting and stopping automatically in accordance with the pressure limit switch on the

(Continued on Page 58)

WELL REGULATED

Here a Chaplin-Fulton High-Pressure Regulator and a C-F Low-Pressure Regulator with automatic cut-off are seen on the fuel line of a 400-h.p. gas engine used by a leading oil company in Kansas. Chaplin-Fulton pressure-control devices for all uses have been standard equipment in the oil and gas industry for over 50 years. . . Ask for catalog.



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The **CHAPLIN-FULTON MFG. CO.**

28-40 Penn Ave., Pittsburgh, Pa.

Western L.P.G.A. Section Holds December Meeting

OVER 75 members of the Pacific Coast Section of the Liquefied Petroleum Gas Association met December 15 at the Mayfair Hotel in Los Angeles to review the proposed revisions of the National Fire Protection Association pamphlets pertaining to the handling and storage of liquefied petroleum gases and to the use of these gases as engine fuel. L. C. Roney, secretary of the Pacific Coast Section, presided in the absence of Gilbert Woodill, chairman.

Suggestions formulated by the committees for the revision of the pamphlets were presented to the delegates by Turner C. Smith, General Petroleum Corp.

Delegates from all sections of the L.P.G.A. will gather in Oklahoma City, February 21 and 22, where further steps will be taken toward the revision of the pamphlets. Representing the Western Section will be Keith Lamont, Parkhill Wade, Inc.; David Perrington, Standard Oil Co. of Calif.; and Harold W. Wickstrom, consulting engineer.

■ ■

So. Counties Co. Completes San Pedro Butane Plant

Southern Counties Gas Co.'s new stand-by butane plant, recently completed at San Pedro, Calif., underwent its first preliminary test during the early part of December. No gas has been put into the system as yet; but a test run, simulating emergency conditions, will be made shortly. Cost of the installation, which includes buildings, piping, heat exchangers, compressor equipment, vaporizers and control equipment, is set at approximately $115,000. The plant will serve as stand-by for the San Pedro district natural gas distribution system, and indirectly to the company's entire system, since by supplying butane service to San Pedro consumers during an emergency, an equal volume of natural gas will be released for use elsewhere.

■ ■

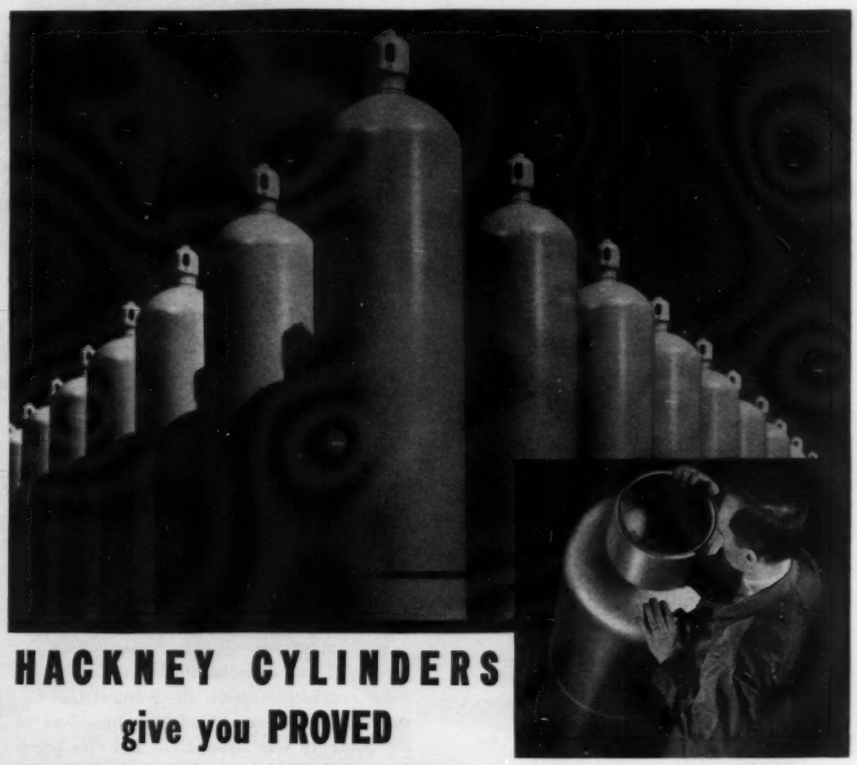
Tennessee Adopts Liquefied Petroleum Gas Regulations

The Fire Marshal of Tennessee has promulgated state rules and regulations Nos. 11 and 12 on liquefied petroleum gas. Pamphlet No. 11 is the N.F.P.A. Code for the Construction and Installation of Liquefied Petroleum Gas Systems for Enforcement by Fire Marshals or other Regulatory Bodies adopted by the N.F.P.A. at its 1937 annual meeting. Pamphlet No. 12 is the N.F.P.A. Regulations for the Design and Operation of Equipment for Use of Liquefied Petroleum Gas as Motor Fuel. There are now six states in which the N.F.P.A. recommendations on liquefied petroleum gas have been adopted in law or as regulations having the force of law. These are: Kansas, Louisiana, Michigan, Mississippi, Tennessee and Texas.

■ ■

Fisher Issues Bulletin

Fisher Governor Co., Marshalltown, Iowa, has issued Bulletin No. 42-C, covering a line of liquefied petroleum gas regulators for two drum and single drum systems. The 12-page bulletin covers in detail each type in the line, and is profusely illustrated with charts and drawings of the equipment.



HACKNEY CYLINDERS give you PROVED ECONOMY and EFFICIENCY

The outstanding preference for cylinders made by Pressed Steel Tank Company proves the satisfactory service which they are performing in the Gas industry. And the continued, year-after-year specification of Hackney products is evidence of their economy and efficiency.

Hackney's more than 35 years of precision manufacturing experience assure uniform strength, capacity and weight. Absolute dependability is also a time-proved feature of the several types of Hackney containers made specially for the storage and transportation of Propane and Butane and Propane-Butane mixtures.

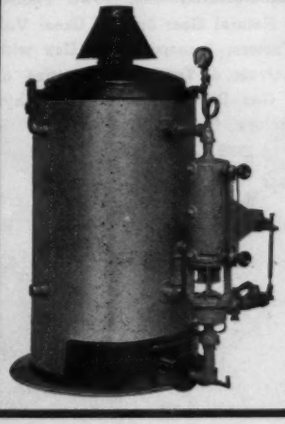
Be sure that you have complete information about standard and special Hackney containers. Write for full details today. There is no obligation.

Hackney MILWAUKEE

PRESSED STEEL TANK COMPANY

208 S. La Salle St., Rm. 1185, Chicago
666 Roosevelt Building, Los Angeles
1363 Vanderbilt Concourse, New York
1463 South 66th Street, Milwaukee

Containers for Gases, Liquids and Solids



INDUSTRIAL GAS BOILERS

Plain tubular . . . . . ¾ to 10 H.P.
Water Leg tubular . . 5 to 45 H.P.
HE Flueless . . . . . 1 to 18 H.P.

ASME Code for 100 lbs. S.W.P., also for higher pressures.
Non-electric Low Water Cut-offs for all types of boilers.

P. M. Lattner Mfg. Company
CEDAR RAPIDS IOWA

NEW
SMYLY
H_2S Tester

WITH PRE-TREATED TEST DISKS

"Handiest device of its kind," say gas men who have used it. No messy lead acetate solution. Quick, accurate tests made in a jiffy using dry pretreated paper disks. Pays for itself in time saved alone. Write today for Free Bulletin.

CUT PURIFICATION COSTS

Reductions in purification costs up to 50% have resulted from recommendations of Connelly Engineering Department. Connelly's complete purification service is saving gas companies thousands of dollars annually. Write for details.

CONNELLY IRON SPONGE & GOVERNOR COMPANY
CHICAGO, ILL. ELIZABETH, N. J.

W. J. Young, President of Oklahoma Co. Dies; L. A. Farmer is Successor

W. JENNINGS YOUNG, president of the Northern Oklahoma Gas Co., of Ponca City, Okla., died November 26, 1938.

Mr. Young was born in Butler, Pa., in 1896. He attended the grammar schools and high school of Butler, and in 1915 entered Penn State where he matriculated in the course of Metallurgical Engineering. His college course was interrupted by 18 months service in the World War where he served in the heavy artillery. He finished his college career in 1920, and in October of that year was employed by the Oklahoma Natural Gas Co., Tulsa, in the meter department, and during his 18 years service with that company, worked in nearly every department. He was vice president in charge of operations at the time of his resignation in May of this year when he accepted the presidency of the Northern Oklahoma Gas Co., at Ponca City.

Mr. Young was an active member of the American Gas Association, having served on many committees under the Natural Gas Department. He was second vice president of the Southern Gas Association and vice president of the Oklahoma Utilities Association. Mr. Young's brother, G. S. Young, is vice president and general manager of the Michigan Gas Transmission Co., of Detroit. His father, W. H. Young, of Butler, was in the early days interested in the oil and gas business in western Pennsylvania.

L. A. Farmer, of Tulsa, Okla., December 19, was named president and general manager of the Northern Oklahoma Gas Co., to succeed Mr. Young. Mr. Farmer has been an employee of the Oklahoma Natural Gas Co., Tulsa, for 21 years and since 1934 has been general superintendent of that company.

■ ■

Harris and Eichengreen On A.G.A. Executive Board

D. W. HARRIS, of Shreveport, La., vice president and general manager of the Arkansas Natural Gas Corp., and L. B. Eichengreen, vice president of the Philadelphia Electric Co., have been elected to the executive board of the American Gas Association, according to announcement by Conrad N. Lauer, of Philadelphia, newly elected president of the association.

Mr. Lauer also reported an increase of nearly 20 per cent in the number of new central house heating installations connected to the lines of gas companies since July 1, 1937. He estimated that the total number of central house heating installations of all United States gas companies as of July, 1938, amounted to 825,000. In addition, he said, there are approximately 1,400,000 dwellings heated by unit heaters, space heaters and floor furnaces, giving a total of more than 2,225,000 homes in the United States that are heated by gas.

■ ■

Pittsburg Water Heater Co. Appoints Representatives

Robert C. Hill, general sales manager of The Pittsburg Water Heater Corp., Pittsburgh, Pa., has announced the appointment of the following men as representatives of the Pittsburg company: Walter J. Kenney for Ohio, Indiana and Illinois; E. M. Griswold, Jr., in Western Pennsylvania and West Virginia; J. D. Taylor in North and South Carolina, Tennessee, Georgia and Florida; and Chris Marsden in New Jersey and New York.

These representatives will introduce the company's 1939 line and a promotional and selling plan for merchandising automatic gas water heaters.

■ ■

P.C.G.A. Technical Meeting Set For March 23-24

Harold G. Laub, chairman of the Pacific Coast Gas Association Technical Section, has announced that the Spring technical conference of the association will be held on March 23 and 24 in Los Angeles. All meetings are to be held in the building of the Southern California Gas Co., 810 South Flower Street, Los Angeles.

Mr. Laub is arranging a program for the conference and has set a deadline at February first to receive committee contributions.

HANDBOOK
BUTANE-PROPANE
GASES

415 Pages

CONTENTS: Semi-Bulk Distribution: Use of Butane in Buses: Combination Propane Operated Utility Plant: Use in Internal Combustion Engines: Design & Installation of Storage: Supply from Petroleum Refineries: Engineering Data on the Lower Olefins: Domestic Appliance Testing and Utilization: Economical Comparisons with Coal, Oil, Electricity, Producer Gas, Manufactured Gas: Town Plants: Manufacture from Natural Gas: Special Uses: Volume Correction Factors: Transportation: Use with other Gases: Analysis & Testing: Properties of Mixtures: Bottled Gas Distribution: Bibliography: Central Plant Directory: Catalog Section.

SECOND EDITION (Revised November, 1938)

$5.00 *Plus Postage*

We pay the postage on orders accompanied by remittance

Published by Western Business Papers, Inc., publishers of

GAS
The NATIONAL Gas Magazine

OIL & GAS Equipment Review,
810 S. SPRING ST.
Los Angeles, Calif.

Preview of coming campaigns by

P·G·and E·

PACIFIC GAS AND ELECTRIC COMPANY

GAS APPLIANCE SOCIETY OF NORTHERN CALIFORNIA

Peak Month on Gas Heating

AGAIN this month, all seven types of gas heating equipment will be featured in P. G. and E. advertising.

This advertising will include weekly newspaper ads in 239 papers, three hundred newly designed outdoor posterboards, half a million stickers on company bills, and approximately one thousand 4-foot display cards on company trucks. Everywhere your customers will see a new, fresh, vigorous appeal to join the "Easy Chair League" by installing carefree GAS heating.

The newspaper advertisements bear the P. G. and E. signature but say nothing about makes, exclusive features or prices. They are yours to use by simply running your own message along side.

G 201-139

DEALERS: By watching this page from month to month you can keep informed of sales promotional campaigns to be sponsored by the Pacific Gas and Electric Company and the Gas Appliance Society. Detailed information will be supplied, as usual, through the mail. If such information is not received, call our local office or write Gas Appliance Society, 1355 Market Street, San Francisco, California.

F. H. Brooks, Northern Natural Chief, Retires, B. R. Bay Named to Post

THE retirement of Frank H. Brooks, president of Northern Natural Gas Co., Omaha, Nebr., became effective January 1, and election of Burt R. Bay, executive vice president, to succeed Mr. Brooks as president, was announced at the company's home offices Saturday, December 17, following the annual meeting of the board of directors.

Mr. Brooks' retirement is in conformity with the established policy of the company under its age limit and income retirement plan. His resignation from the presidency of Northern Natural Gas culminates nearly 45 years in public utility service which he started when he entered the service of the street railway company in Erie, Pa., his native city.

Prior to leaving the presidency of the Iowa-Nebraska Light and Power Co. in Lincoln, Nebr. in 1931 to head Northern Natural, Mr. Brooks had become nationally prominent in the public utility field through his successful administration of several gas, electric, and street railway companies.

Under his direction the Northern Natural Gas Co. has developed into one of the major natural gas pipe line systems of America, serving more than 130 cities and towns in Kansas, Iowa, Nebraska, South Dakota and Minnesota. In addition to its pipe lines carrying gas from the Texas fields, the company also operates the People's Natural Gas Co. serving cities and towns in Nebraska, South Dakota and Iowa; the Minnesota Northern Natural Gas Co. operating in Minnesota; the Argus Pipe Line Co. and the Garden City Gas Co. in Kansas.

F. H. BROOKS

B. R. BAY

The board of directors also announces promotion of John F. Merriam, assistant to the president, to be secretary-treasurer in addition to continuing his post as assistant to Mr. Bay, and A. B. C. Dilworth, general auditor, named comptroller and assistant treasurer.

Mr. Bay has had a long and successful career in the natural gas industry, being identified with it in all its phases for more than 30 years. Immediately prior to becoming the executive vice president and a director of Northern Natural Gas Co. last July 31, he was vice president and general manager of Panhandle Eastern Pipe Line Co. at Kansas City, Mo.

■ ■

Gas Fuel Featured at National Power Show

THE thirteenth annual Power Show was held at Grand Central Palace, New York City, December 5 to 10, and the industrial gas section of the American Gas Association, jointly with The Brooklyn Union Gas Co. and Consolidated Edison Co. of N. Y., Inc., took floor space to the extent of 616 sq. ft. with 44 ft. of frontage on a main aisle near the center of the first floor. In this area was assembled representative gas-fired equipment, produced by 10 manufacturers and covering a broad range of industrial gas heating units.

The display was designed and executed by the art department of Consolidated Edison Co. and was manned at all times by relays of men from that company, The Brooklyn Union Gas Co., and the exhibiting manufacturing firms. As the last of six displays at national industrial expositions sponsored this calendar year by the industrial gas section of the Association, it was organized by that section's committee on displays, chairman D. W. Chapman. All planning was done by a working committee consisting of R. V. Howes and H. W. Butterfield, Consolidated Edison Co., Frank T. Herty and A. L. Palmer, The Brooklyn Union Gas Co., and Eugene D. Milener, American Gas Association.

■ ■

Quigley Issues Illustrated "Hytempite" Catalog

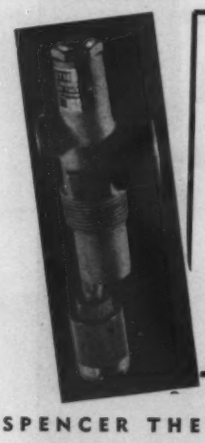
Quigley Co., Inc., 56 West 45th Street, New York City, manufacturers of industrial specialties, has issued a new 20-page "Hytempite" catalog, illustrated with photographs of installations in a variety of industries, including gas and coke plants. "Hytempite," it is claimed, is a plastic, air-setting, high temperature cement, for bonding firebrick and shapes with thin, strong air-and-gas-tight joints; building monolithic "gastite" baffles; and for quick hot or cold furnace repairs. In industrial gas applications, it may be used as a binder wherever firebrick, silica brick or granular refractories are used. It retains its strength up to temperatures at which standard firebrick break down, and yet permits the expansion and contraction of the bonded structure.

■ ■

Oklahoma Association Elects Officers

The board of directors of the Oklahoma Utilities Association at a meeting in Tulsa, Okla., December 8, elected the following officers to serve the ensuing year.

Glen C. Kiley, Oklahoma Gas and Electric Co., Oklahoma City, president; Frank B. Long, Oklahoma Natural Gas Co., Tulsa, first vice-president; R. W. McClure, Oklahoma Power and Water Co., Sand Springs, second vice-president; W. R. Emerson, Oklahoma Gas and Electric Co., Oklahoma City, treasurer; Kate A. Niblack, Oklahoma City, secretary.



KLIXON RELIEF VALVES

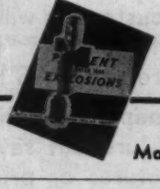
SNAP-OPENING—SELF CLOSING

FOR TEMPERATURE — PRESSURE — OR BOTH

For instant, positive action—your safest protection against domestic hot water tank explosions—install Klixon Relief Valves. Operated by a scientifically calibrated thermostatic disc, these valves **snap** into full opening **instantly** at the danger point and **snap** closed when safety is resumed. Available for temperature, pressure or both. For all types of installation. Fusible plug valves also available.

KLIXON

Send for new complete bulletin.



SPENCER THERMOSTAT COMPANY Attleboro, Mass.

Electrogas

FOR EVERY HEATING NEED

FURNACES

BLOWERS

FILTERS

WASHERS

Air Conditioning • Heating Equipment

WRITE FOR ATTRACTIVE DEALER PROPOSITION

ELECTROGAS FURNACE CO. 2575 BAYSHORE BLVD. SAN FRANCISCO, CALIF.

P.C.G.A. PREVIEW

COOPERATIVE LOAD-BUILDING

MY all-Gas HOME is a JOY
CORREA KERNS, courageous and successful manufacturer-retailer, applies keen business judgment to domestic problems—selects modern gas appliances for her home.
"I love gas cooking," says this Los Angeles business woman and home-maker. "My new gas range combines unrivalled speed with sure results, and its automatic controls free me from oven-watching." ☆ Comfort keynotes the Kerns home in suburban Eagle Rock. Gas fuel automatically supplies hot water and keeps every room healthfully warm—at thrift-budget cost. ☆ 1939 brings such important appliance improvements as the "CP" (Certified Performance) gas range, now displayed by your Gas Company or Appliance Dealer. Investigate today's appealing prices and terms.
CORREA KERNS
This exclusive Wilshire Boulevard shop reflects Correa Kerns' third business expansion since she started the manufacture and sale of lamps in 1921, with $25 capital, following her husband's death.
Mrs. Kerns is experienced in selling as well as in designing and manufacturing. The original "one-woman" business now requires five employees.
LET GAS DO THE 4 BIG JOBS
THE MODERN FUEL
COOKING • HOUSE HEATING • WATER HEATING • REFRIGERATION

ACT 1

January ushers in the eleventh consecutive co-operative load-building campaign, financed by Pacific Coast Gas Companies for the benefit of the entire industry. 1939 advertising will appear in 22 domestic and business magazines.

INTRODUCING

the first, full-page "domestic" advertisement in 1939 series for *Sunset*, *Calif. Parent-Teacher*, *Federation News* and *Parent-Teacher Journal*.

• A human-interest sales message featuring an "interesting personality" and her all-gas home.

P. C. G. A.
H. L. Farrar, President
Clifford Johnstone, Managing Dir.

JANUARY 1939

COMMITTEE
A. C. Joy, P. G. & E.
J. S. Spaulding, So. Calif. Gas Co.

J. H. Jourdan, Former Chief of Brooklyn Union, Dies

JAMES H. JOURDAN, former president and board chairman of the Brooklyn Union Gas Co., Brooklyn, N. Y., passed away on November 25 at the age of 74.

In 1914, 32 years after starting with the Brooklyn Union Gas Co. as a laborer, Mr. Jourdan became president of the company, succeeding his father, the late General James Jourdan.

In 1895 Mr. Jourdan became chief engineer of one of the company's divisions, and in 1910 vice-president with the title of chief engineer. In this capacity he had charge of the rebuilding of the Metropolitan, Citizens, Nassau and Williamsburg works.

Mr. Jourdan served as president until 1934, when he became chairman of the board. He retired from this post in 1937, but continued as a director. He was a member of the American Gas Association

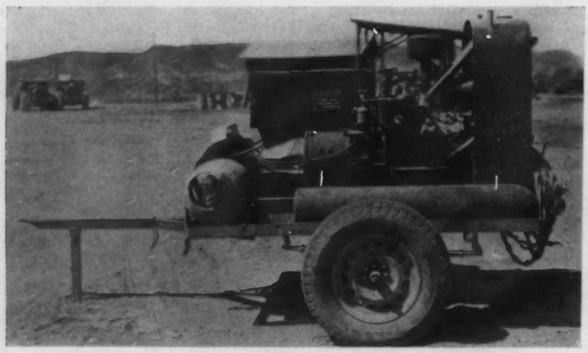
■ ■

Ada Schroeder Added to Gas Service Co.'s Home Service

Ada Schroeder was added to the home service department staff of The Gas Service Co., Kansas City, Mo., December 1. Miss Schroeder is a graduate of McPherson College, Kansas, and attended Kansas State College.

PORTABLE ELECTRIC WELDING OUTFITS GIVE ECONOMICAL SERVICE WITH BUTANE FUEL

Portable electric welding outfits using BUTANE for fuel and with engines equipped with ENSIGN Carburetors, are providing economical and efficient service in the oil fields. BUTANE is also used for cutting in conjunction with oxygen.



Portable electric welding outfit operating on BUTANE *with* ENSIGN *Carburetor.*

ENSIGN was *first* in developing carbureting equipment for BUTANE fuel. Write the factory or branches for information regarding the use of BUTANE in the Oil Industry.

ENSIGN CARBURETOR CO., LTD.
LOS ANGELES · DALLAS · CHICAGO

Faster Repairs without Special Equipment

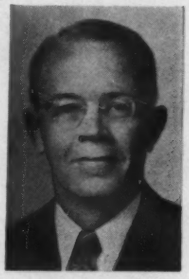
On distribution line systems you can make extensions and repairs much faster in the field by using pipe with a mill-applied No-Ox-Id Master Coat. Joints and maintenance take minimum work and equipment. As No-Ox-Id and No-Ox-Idized Wrappers are available for cold hand application, crews do not need heating kettles, pouring cans, and other equipment. Yet you get positive protection against corrosion.

DEARBORN CHEMICAL CO., CHICAGO, ILL.
LOS ANGELES 807 Mateo St. TRinity 3385
SAN FRANCISCO 421 Bryant St. SUtter 8688

NO-OX-ID IRON RUST The Original Rust Preventive

Chadderdon New President of Fisher Governor Co.

N. T. CHADDERDON has been elected president and treasurer of the Fisher Governor Co., manufacturers of automatic control specialties, being honored at a banquet given recently by Fisher employees at Hotel Tallcorn in Marshalltown, Iowa. Mr. Chadderdon succeeds the late Jasper H. Fisher, former president.



N. T. CHADDERDON

First public announcement of Mr. Chadderdon's election as president was made at the banquet. Guy L. Reed, vice president of the Harris Trust & Savings Bank of Chicago, and a boyhood friend of Mr. Chadderdon, was the principal speaker.

Mr. Chadderdon has been secertary-treasurer of the company for the past several years, and has been with the Fisher organization since 1931. Prior to that date, he was employed by Stevenson, Harrison & Jordan of Chicago, Ill. Mr. Chadderdon is a graduate of the University of Nebraska.

■ ■

A Review of Gas Industry Accomplishments for 1938

(Continued from Page 21)

largest and most spectacular gas flame ever created by man. The building is 90 per cent completed. Companies on the Pacific Coast are sponsoring an exhibit occupying some 10,000 sq. ft. of space at the Golden Gate Fair. Gas fuel and gas appliances are being used almost exclusively in both expositions for heating, cooking, water heating and for special street lighting and pyrotechnics. To insure adequate gas service at the New York fair, the distribution system has been set up to handle a maximum hourly demand for gas fuel more than four times as much as that required for the Century of Progress Exposition in Chicago during 1933-34.

■ ■

New M. B. Skinner Catalog Describes Pipe Repair Clamp

A new catalog brought out this month by M. B. Skinner Co., South Bend, Ind., features a "leak-loss" chart which embodies graphic information for anyone operating pipe lines. This chart shows how much steam, water, oil or air escapes from various size leaks in pipe, under various pressures. Figures show what these leaks cost at various unit prices. Nine different styles of pipe repair clamps for stopping leaks without replacing pipes are shown in this 32-page catalog. Copies may be obtained free upon request from the Skinner Co.

Polk Named Eastern Sales Head For General Gas Light

GENERAL GAS LIGHT CO., Kalamazoo, Mich., has appointed Robert E. Polk as Eastern sales manager with headquarters at 23 Warren Street, New York City, effective January 1. For a number of years Mr. Polk, as general manager of Equitable Sales Co. and utilization sales manager of Equitable Gas Co. and Duquesne Light Co., Pittsburgh, Pa., has been in charge of all appliance merchandising and gas heating sales for those companies.

R. E. POLK

In 1930 Mr. Polk became general manager of Equitable Sales Co., the merchandising affiliate of the Equitable Gas and Duquesne Light Cos. Prior to that time he served those two companies as industrial gas engineer, superintendent of industrial and commercial gas sales, manager of sales and service department, and general merchandise sales manager.

He has had many years experience in the public utility business. Following a course in ceramic engineering at the University of Illinois, Mr. Polk served as commercial manager of the Southern Illinois Gas Co., then went to Milwaukee (Wis.) Gas Light Co. as industrial gas engineer, and later located in Pittsburgh with the Equitable Gas Co. to organize and manage an industrial and commercial sales department.

■ ■

Montana-Dakota Co. Seeks To Import Canadian Gas

The Montana-Dakota Utilities Co., Minneapolis, Minn., has applied to the federal power commission for authority to import natural gas from Canada into Montana. Gas is now being exported by the Range Oil and Gas Co., Ltd., Canada, under licenses issued by the Department of Trade and Commerce for the Dominion of Canada, and is purchased by the Montana-Dakota company in accordance with an agreement with the Canadian corporation. The gas is taken from a field in Alberta through facilities of the Almont Pipe Line Co., Ltd., to the Montana-Dakota Utilities' main line at Telstad, Montana. It is then sold to customers in Great Falls, Montana, and vicinity.

The Montana-Dakota Utilities Co. develops, produces and distributes natural gas and electric energy to cities and towns in Montana, North Dakota, South Dakota and Wyoming.

■ ■

Utility, Plumbing Bodies Hold December Meeting

A joint meeting of the California Master Plumbers Association and California gas utility company representatives was held December 17 in the office of the Pacific Coast Gas Association in San Francisco. Purpose of the meeting was to discuss the fair trade agreement which has been in existence for five years between the two groups, and to consider possible revisions which might be desirable because of changing conditions.

The Master Plumbers were represented by Loy F. Johnston, Wm. Nies, L. J. Kruse, J. J. McLeod. Representing the utilities were: A. F. Rice, Southern California Gas Co.; H. W. Edmund, Coast Counties Gas and Electric Co.; B. W. Reynolds, Pacific Gas and Electric Co. Pacific Coast Gas Association was represented by Carl A. Swigart.

Findings of this sub-committee will be considered at the regular meeting of the Joint Steering Committee this month.

■ ■

W. N. Bissell to Head A.G.A. Personnel Committee

WILLIAM N. BISSELL has been appointed chairman of the Committee on Personnel Practices of the American Gas Association by Conrad N. Lauer, president of the association. For the past eight years, Mr. Bissell has been personnel manager of the eastern division of Niagara Hudson Power Co. with headquarters at Albany, N. Y.

W. N. BISSELL

The Committee on Personnel Practices, now beginning its third year of existence as an association activity, plans to make important studies of industrial relations problems of the gas industry.

Mr. Bissell entered the public utilities field in 1912 with Stone & Webster in Boston. Until the war he worked as an accountant on Stone & Webster properties in Connecticut, Massachusetts, Nova Scotia, Florida and Michigan. In 1921 he began work with the Adirondack Power & Light Corp. as traveling auditor, and was later made assistant treasurer of that company and of New York Power & Light Corp.

■ ■

Mitchell Named to A.G.A. Advertising Committee

George F. Mitchell of Chicago, president of The Peoples Gas Light & Coke Co., has been appointed a member of the American Gas Association's Committee to Conduct National Advertising. The appointment was announced by T. J. Strickler of Kansas City, chairman of the committee. Mr. Mitchell will represent participating gas companies in Illinois, Indiana, Iowa, Michigan, Wisconsin and Minnesota.

More than 700 gas companies are supporting the advertising campaign which is now in its third year and has been approved by the association's executive board for an extended term of three years.

■ ■

Harris is A.G.A. Director

D. W. Harris, vice-president and general manager of the Arkansas Louisiana Gas Co., Shreveport, La., has been elected a director of the American Gas Association, it was announced recently by Conrad N. Lauer, president of A. G. A., New York City.

"I Like THE Pacific LINE"

Twenty-six years of manufacturing gas heating and ventilating equipment is a factor... but more than that is the satisfaction customers express after they have bought and used PACIFIC. ☆ Another thing ...PACIFIC is the most complete line of gas heating equipment manufactured in the West. Quality features such as PACIFIC Multi-Tubular Burner and completely welded, leak-proof heating element assure the user years of economical and satisfactory service... backed by a firm with over a quarter century reputation for fair dealing.

BE SPECIFIC... SAY PACIFIC

These A.G.A. approved units are recommended by leading engineers, architects and builders: Gas Circulating Heaters, Wall Heaters, Floor Furnaces, Gas Steam Radiators, Gravity and Blower Furnaces, Forced-Air Units, Overhead Units, Duct Furnaces, Blowers and Water Heaters.

Pacific
GAS RADIATOR CO.
1740 West Washington Blvd.
LOS ANGELES, CALIF.

FRASER
GAS HEATING EQUIPMENT

Sell SUMMER WARMTH THIS WINTER *with* FRASER TUCK-A-WAY

Also

- FLOOR AND WALL FURNACES
- FURNACE FANS AND FILTERS
- CIRCULATING HEATERS
- BASEMENT FURNACES
- CABINET FURNACES

IT PAYS YOU TO SELL AND INSTALL THIS SUPERIOR EQUIPMENT

MANUFACTURED BY
FRASER FURNACE CO.
STOCKTON, CALIFORNIA

DISTRIBUTORS
H. R. BASFORD COMPANY
425 Second St. San Francisco
911 S. Grand Ave. Los Angeles

Converting to Butane-Air

(Continued from Page 50)

storage tanks. The installation of the plant equipment and the survey of the customers' appliances was started in July, 1937, and all of the work, including the conversion of the customers' appliances had been completed by October 15, 1937, with the exception of a few call-backs on the customer conversion work. The plant has now been in operation for over one year without an interruption and the B. t. u. content has stayed within predetermined limits as controlled by the Calorimixer unit. The operation and maintenance of the plant is carried on by the local service men, and it has not been necessary to provide any additional help during this period of time. By the installation of this propane-air gas producing equipment, the company has been able to make a material saving in the gas production and plant maintenance expense. This decrease in costs has also enabled the company to decrease its rate. This saving is gratifying to both the gas company and to the consumers.

There was no station meter provided in the water gas plant, but it was decided to install such a meter in the new plant. Under the former method of operation, it had been estimated that the line loss through the distribution system was approximately 10 per cent. The present unaccounted-for is slightly higher than the former estimate of 10 per cent, due probably to increased leakage from expansion couplings. After these have all been renewed, it is expected that the unaccounted-for will be less than 10 per cent.

The house regulators are giving much better regulation than they did under the old gas. It was thought that all would require reconditioning, but present indications are that this will not be required. The meter diaphragms at present do not show any tendency to dry out and meter changes are proceeding on a normal seven-year basis.

The operation of the plant during the past year has been very gratifying to both the customers and to the management. The conversion of the customers' appliances was carried out in such a satisfactory manner that many additional customers have been secured during the past year.

The success of this installation again proves the economic and mechanical soundness of this type of installation in the small gas plant.

■ ■

Distribution Systems for Arizona Towns Completed

The two new natural gas distribution systems for the cities of Benson and Tombstone, Ariz., were completed in December, and gas is now being served to the two communities.

In Benson 133 services have been made, and 40 more applications received. A total of 116 domestic services and four commercial were made in Tombstone. Gas originating in New Mexico fields is being supplied by the El Paso Natural Gas Co. The two systems were financed by PWA funds.

■ ■

G. W. Long Succumbs

George W. Long, relief head gas maker and production bureau veteran of the Portland (Ore.) Gas and Coke Co., died suddenly October 9. Mr. Long had been a member of the Portland company organization since 1919, when he started as a gas maker's helper, and had advanced to the position he held at the time of his death.

EXCLUSIVE design of Mueller Gas Era Furnace gives longest life---lowest operating cost.

L. J. MUELLER
FURNACE COMPANY
MILWAUKEE

GAS — 810 South Spring Street, Los Angeles, California

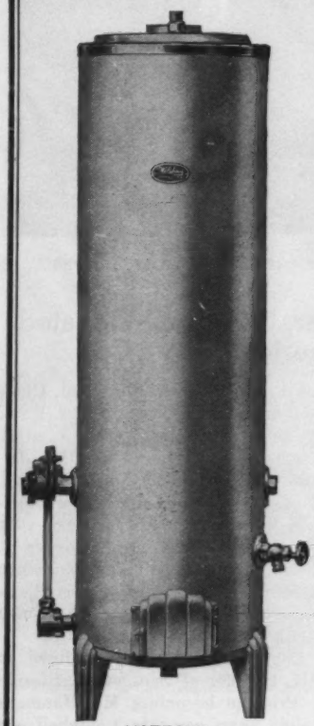
Yes! SEND ME GAS

for ☐ 1 Year at $1.00, ☐ 3 Years at $2.00

Other than United States, $2.00 per year

Name..... Position.....
Company.....
Address.....
City..... State.....

☐ Check enclosed ☐ Send bill

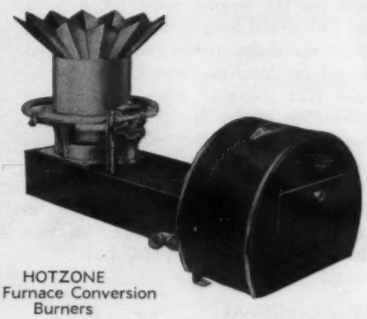


HOTZONE
Gas Water Heaters

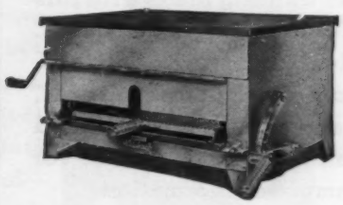
MAKE 1939 A YEAR OF PROFIT AND PROGRESS

Prepare now to advance in close step with the new building programs. Tie in your local activities with the important national programs which include home modernization, low-cost housing, insulation, kitchen planning, automatic heating and air conditioning.

WELSBACH PRODUCTS WILL HELP YOU!



HOTZONE
Gas Furnace Conversion Burners



HOTZONE
Broiler Griddles

WELSBACH COMPANY
GLOUCESTER CITY, NEW JERSEY
BRANCHES IN CHICAGO AND SAN FRANCISCO
Since 1887, Pioneers in the Manufacture of Gas Burning Appliances

K-CO

GUARANTEED QUALITY GAS STOPS

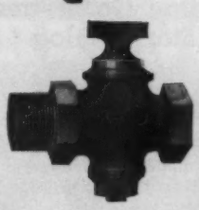
G-203 — Tee Head Standard Gas Stop

G-205 — Square Head Standard Gas Stop

G-208B — Lever Standard Gas Stop Boston Key

G-115 Lock Wing Brass Gas Stop

G-101 — Flathead Special Gas Stop



G-213 — Tee Head Standard Gas Stop Male and Female

FOR PRICE LIST MAIL THIS CONVENIENT COUPON

- Made from finest quality metals, machined to exacting specifications. Factory tested; guaranteed for ease of operation and freedom from leakage.

KITSON COMPANY, 2409-15 WESTMORELAND ST., PHILA., PA.

- Without obligation, send me your latest price list and descriptive literature on K-CO GAS STOPS.

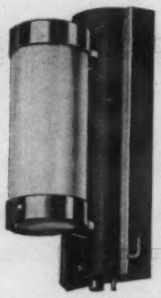
NAME..... TITLE.....

COMPANY.....

ADDRESS.....

G-1-39

MODERN
GAS
LIGHTING



The HUMPHREY
OPALITE

Get valuable domestic gas lighting loads with this Modern Gas Wall Lamp. Ideal for stores, offices, homes. Burns natural, manufactured, or liquified petroleum gas. Write for complete information.

General Gas Light Co.
Kalamazoo, Michigan

Northern Indiana Co. Uses New Consumer Publication

THE NORTHERN INDIANA PUBLIC SERVICE CO., Hammond, Ind., announces a new consumer publication for use as an insert with monthly statements, prepared and furnished by Bozell and Jacobs, Inc., the company's advertising counsel.

Entitled *Hoosier Gas News*, this new four-page publication is 7 x 5½ in. in two colors and is readily adaptable for local use by all gas companies, the front and back pages being devoted to promotional advertising. In the January issue, the feature article is a news story on gas being the fuel chosen for cooking, water heating and space heating at the New York World's Fair. There is also a column on the second page for a local message. The advertisement on the back page as well as the name of the publication can be changed for local conditions.

Hoosier Gas News is ready for mailing about the 15th of the month preceding its issue to obtain a complete mailing for any billing cycle. It is keyed to tie-in with A.G.A. national advertising.

Price schedules can be obtained on request from Bozell and Jacobs, Inc., Traction Terminal Building, Indianapolis, Ind.

■ ■

Association Plans Meeting

The Pennsylvania Gas Association's 31st annual meeting will be held at the Sky Top Club, Sky Top, Pa., May 2-4. A mid-year sales meeting is to take place in Philadelphia in February.

BASO
THERMO ELECTRIC SAFETY CONTROL FOR GAS BURNING APPLIANCES
BOILERS ★ FURNACES ★ CONV. BURNERS ★ SPACE HEATERS ★ UNIT HEATERS ★ AIR CONDITIONERS OVENS ★ RANGES ★ WATER HEATERS, ETC.
MILWAUKEE GAS SPECIALTY CO.
MILWAUKEE ★ WISCONSIN
GAS VALVE SERIES 500
ELECTRIC SWITCH SERIES 600

THE CONDENSATION ELIMINATOR
is used where space is limited. It eliminates Condensation and with its Draft Construction prevents costly preheated air from escaping out of the chimney. That means warmer basements—5°-7° F. and produces a big saving in fuel. Don't forget! —the Condensation Eliminator helps you save money.
Condensation Engineering Corporation
335 South Western Avenue, Chicago

E. B. HANMER

R. W. CAMPBELL

Hanmer, Campbell Elevated By American Stove Co.

THE American Stove Co., Cleveland, Ohio, has announced the appointment of E. B. Hanmer as sales supervisor for the Central Division territory, which includes Ohio, Indiana, Kentucky, western Pennsylvania and western New York. The appointment became effective Jan. 1, 1939. For the past 10 years Mr. Hanmer has been manager of the Southern California division, and has served on several Pacific Coast Gas Association committees, becoming well known on the Pacific Coast through this work.

R. W. Campbell has been appointed to succeed Mr. Hanmer as Southern California manager. Prior to becoming Mr. Hanmer's assistant eight years ago, Mr. Campbell was connected with the Southern California Gas Co., in Los Angeles.

Over 100 Southern California gas utility men honored Mr. Hanmer at a banquet at the Mayfair Hotel, Los Angeles, on December 14. He left to assume his new duties on December 23.

■ ■

Gas Utility Advertising Becomes of Age

(Continued from Page 23)

ing a woman pleased as she cooks on a new range also helps whet the reader's desire for one.

A few "rules" like this do not, of course, make an advertising program. Applying them to specific advertisements has, however, done much in the past few years to add "zip" and punch to utility advertising.

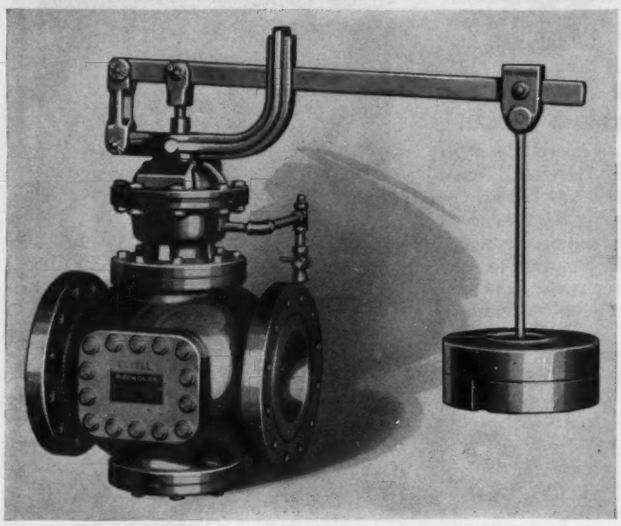
Through their use and through a more complete understanding of the relationship of advertising to sales, public utility advertising has "come of age."

■ ■

Chaplin-Fulton Co. Issues New Regulator Catalog

The Chaplin-Fulton Manufacturing Co., Pittsburgh, Pa., has just issued a new catalog of their Vigilant Feed Water Regulator and Other Steam Specialties. The 59-page catalog contains numerous photographs and drawings, as well as descriptive material, of the regulator and other equipment. Copies may be obtained from the company at 28-40 Penn Ave., Pittsburgh, Pa.

WIDE DELIVERY RANGE *Plus* FLEXIBILITY....



● Wide Delivery Range, plus Extreme Flexibility, are two of the features of the REYNOLDS High Pressure Line Regulator. Illustrated above, without the auxiliary bowl, this Reynolds unit assures accurate and dependable control of outlet pressures from 2 to 100 pounds in the line. This wide variance in outlet pressure is made possible by the use of four different sizes of diaphragm cases.

On inlet pressure the range is up to 650 pounds. The Reynolds High Pressure Line Regulator can be furnished in cast iron, steel or bronze body, depending on pressure requirements. This Regulator is also furnished with auxiliary controls if desired. Reynolds High Pressure Line Regulators are built with auxiliary bowl when so ordered. Efficiency tests made at the factory are filed for reference and are used later for checking all of these units in service. This system assures continued accuracy, safety, years of service and economical upkeep. Write for details.

BRANCH OFFICES:
421 Dwight Building
Kansas City, Missouri
2nd Unit
Santa Fe Building
Dallas, Texas

★

REPRESENTATIVES:
Eastern Appliance Company
Boston, Massachusetts
Wm. A. Ehlers
49 S. Clinton St.
East Orange, N. J.

REYNOLDS GAS REGULATOR CO.
Anderson, Indiana, U. S. A.
GAS CONTROL SINCE 1892

All Regulator Needs Met Here in Size, Pressure, Use

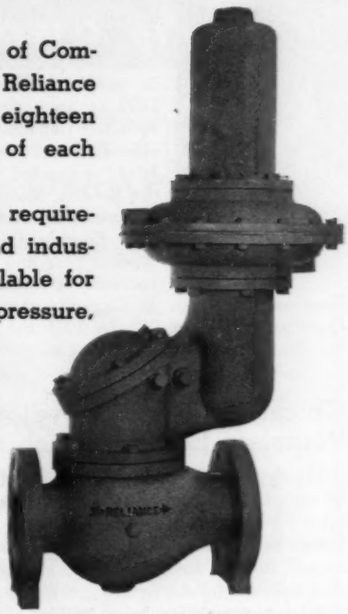
A completely new line of Combination Balanced Valve Reliance Regulators is offered in eighteen models and six sizes of each model.

This line meets every requirement for distribution and industrial service and is available for high pressure, semi-low pressure, low pressure, back pressure and for motor valve and boiler fuel control.

With many other types, Reliance Regulators cover the complete range of gas control—manufactured, natural, liquid petroleum, butane and propane gases.

Improvements made by constant contacts with users and the study of changing and new conditions in service have kept the Reliance lines well ahead of the needs of the industry in design, quality, types, sizes and capacity.

All Reliance Regulators embody exclusive engineering ideas and methods of construction that give the users positive lock up, sensitive control, accessibility of valves and seats and greater capacity than that of any other Regulators of the same size.



High pressure, spring loaded, CBV-201 offset connected reducing Regulator.

Low pressure, inside weight loaded CBV-300 offset connected reducing Regulator.

SEND FOR BULLETIN NO. 50

RELIANCE REGULATOR CORPORATION

1000 Meridian Avenue Alhambra, California

RELIANCE

H. C. Abell, Former A.G.A. President, Succumbs

Harry C. Abell, 69, vice-president of Electric Bond and Share Co., New York City, holding company of New Orleans Public Service, Inc., died in New Orleans November 24.

H. C. ABELL

Mr. Abell, president of the American Gas Association in 1925 and 1926, began his career in public utilities in 1889 as an apprentice with the Canadian Pacific Railway. He was later connected with the Belding Motor Co., Chicago, Canadian General Electric Co., the Anchor Line and International Navigation Co., Emerson, McMillin & Co., and American Light and Traction Co. In 1921 he joined the Electric Bond and Share Co.

■ ■

Chicago Vitreous Develops Porcelain Enamel Finish

Chicago Vitreous Enamel Product Co., Cicero, Ill., has announced the recent development of their porcelain enamel finish known as "Silverflake." Heretofore, porcelain enamel finishes have required first a ground coat followed by one or two cover coats, each requiring a separate firing in high-temperature furnaces. Some sort of organic "crackle" or "wrinkle" finishes have in many instances been adopted. The recently developed "Silverflake" is merely a ground coat over-sprayed with a "silverflake" liquid. A single firing is all that is necessary to provide a genuine porcelain enamel finish. The new finish has a dark color background which provides a contrast for the "silverflakes." Both in actual use and laboratory research "Silverflake" has shown great adherence and, being inorganic porcelain enamel, is immune to discoloration, heat corrosion, absorption, and is easy to keep clean. It can be applied equally well to either cast iron or sheet steel.

■ ■

McKay Joins Bozell & Jacobs

Edward S. McKay has joined Bozell & Jacobs, advertising agency, Houston, Texas, as an account executive. He was formerly in the publicity and advertising department of Public Utility Engineering and Service Corp., management and service company for the Standard Gas and Electric system, and previous to that was District publicity representative for General Electric Co.'s Central District, both in Chicago.

He was with General Electric Co. in Schenectady and Chicago for four years and with Public Utility Engineering and Service Corp. for one and one-half years.

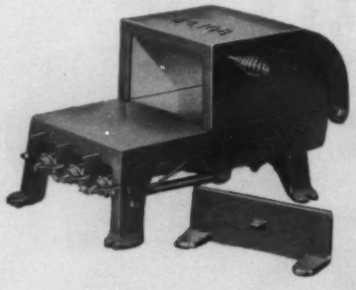
In his new position, Mr. McKay will handle the United Gas Corp. account.

■ ■

Noah Carpenter Resigns

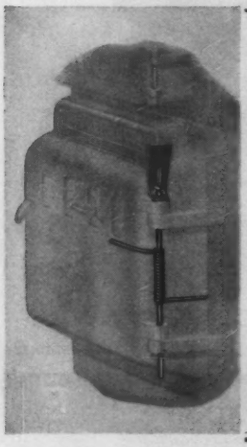
Noah Carpenter, manager for 15 years of the Chelsea, Okla., office of the Gas Service Co., resigned from his position January 1. J. L. Shirk will succeed him.

JOHNSON NO. 108 BENCH FURNACE HEATS POWERFULLY AT LOW COST



Three Patented Johnson Direct Jet Bunsen Burners give intense perfect combustion with any natural, manufactured or bottled gas without blower or forced air-blast. Designed for fast heating of largest soldering coppers, branding and stenciling irons. Refractory-lined for ideal heat-treating of carbon steel tools and parts. Write for free Johnson catalog today.

JOHNSON GAS APPLIANCE Co. Cedar Rapids IOWA



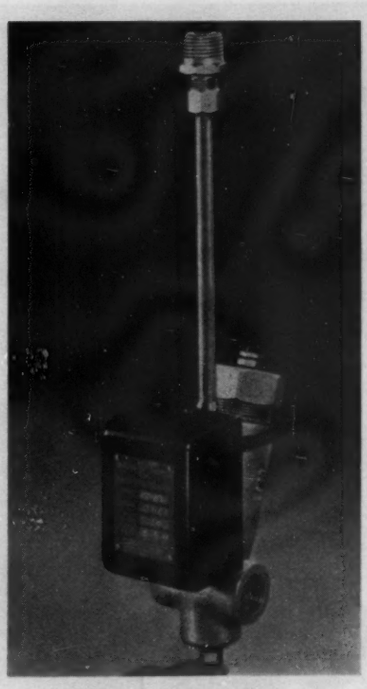
Keep that Door

CLOSED!

Open furnace doors rob conversion burners of efficiency, cause customer complaints. This Inland Door Closer keeps furnace door firmly and securely shut. When the door is blown open, this device automatically and unfailingly closes it again. No conversion burner 100% efficient without this protection. Strongly made, cadmium plated, provided with wedge to hold door open when desired. Write for bulletin describing in detail this and other money-saving Inland Gas Specialties.

INLAND GAS SPECIALTIES

INLAND MANUFACTURING COMPANY
1120 NORTH CICERO AVE. CHICAGO, ILLINOIS



Low Water Cutout Put Out By General Controls Co.

General Controls Co., Glendale, Calif., offers the industry an all-electric low water cutout that provides a simple means for automatically turning off fuel burners when boiler water becomes dangerously low. The low water cutout is adapted for quick installation between regular gage glass and coal, oil or gas-fired boilers.

The operating means of the device are as follows: a mercury relay of the rotating armature type (no iron to iron contact) is actuated by current conducted by water in the electrode chamber. A level differential exists between the cut-in point and cut-out point by virtue of relay characteristics which requires more current to pull in than to drop out. Electrode current is nominal, being but a few hundredths of an ampere, and further permits use of 24 volts on electrode instead of high volatge usually common to this type of device. The low water cutout requires a source of 24 volts alternating current for operation. Further information and prices may be obtained by writing the manufacture, General Controls Co., 700 West Ivy Street, Glendale, California.

■ ■

Worthington Corp. Appoints W. B. Strong To New Position

Worthington Pump and Machinery Corp. has appointed Walter B. Strong assistant general sales manager. Formerly manager of the corporation's export division, Mr. Strong will continue general supervision of export sales, and will also be identified with certain phases of domestic sales work. He is a graduate of Massachusetts Institute of Technology, and has been a member of the Worthington organization since 1920.

George Gellhorn, Jr., will succeed Mr. Strong as manager of the export division, having direct responsibility for the corporation's export sales activities.

REASONS WHY THE

GREENLEE

HYDRAULIC PIPE PUSHER SAVES TIME AND MONEY

It makes extensive trenching, back-filling, etc., unnecessary and saves tearing up lawns and pavements.

Under usual conditions, one man can operate the levers with ease.

It has several speeds to suit varying soil conditions.

Depending on the length of base used, it will push from 4 to 7 feet with but one setting of the pipe clamp.

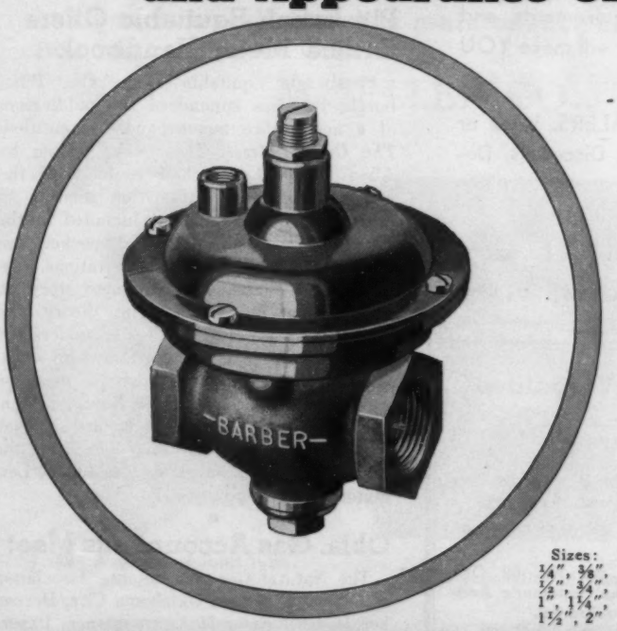
It is easy to handle and simple to set up and operate.

The Greenlee Pusher consists of a hydraulic unit which operates on a notched steel base. Pumping the levers sets up pressure within two oil cylinders, causing the body of the pusher to move forward against the pipe clamp. Depressing the levers releases the pressure, permitting springs within the unit to move the pistons forward to a new notch.

It will pay you to investigate this money-saving method of pushing pipe. Write for full details now.

GREENLEE TOOL CO., 1700 Columbia Ave., ROCKFORD, ILLINOIS

BARBER Regulators Add to the Performance and Appearance of ANY Gas Appliance



Sizes: ¼", ⅜", ½", ¾", 1", 1¼", 1½", 2"

THE trim, modern styling of Barber Regulators is a factor which counts, in today's heating equipment, and has influenced many gas appliance makers to adopt them as standard accessories. The prime importance of a thoroughly *dependable* regulator is now recognized as essential to flame control, safety, and fuel economy.

Mechanically, Barber Regulators are built to very high standards of accuracy, and tested for operation within 3/10 pressure drop. All-bronze body is compact and well proportioned. All working parts are brass. Sizes ¼" to 1½" tested and certified by A. G. A. Testing Laboratory. For appliances which you sell, sponsor, or manufacture, your use of Barber Regulators stands as an additional proof of Quality merchandise.

Attractive folders on this Regulator will be furnished free, at your request, for distribution to your trade. Write for catalog and price list on Barber Burner Units for Gas Appliances, Conversion Burners for Furnaces and Boilers, and Regulators.

THE BARBER GAS BURNER CO.
3704 Superior Ave., Cleveland, Ohio

BARBER GAS PRESSURE REGULATORS

American Meter Co. Releases Bulletin On Recording Device

AMERICAN METER CO., INC., New York City, has issued a new bulletin, E-22, describing the Metric-American air actuated remote recorder and controller.

This newly-developed instrument is devised for the recording and control of rate of flow or pressure of gas, air, steam or fluid, or for the recording and control of liquid level. The sending unit, installed at point of measurement, consists essentially of a Westcott-American orifice meter differential gage or Metric-American pressure gage. The receiving unit, with its recording chart and Metric-American controller, may be located in central control room or at any convenient point or distance from the sending unit. A Metric rotary pilot in the sending unit actuates a movable bellows, this movement being transmitted by air or gas under relatively low pressure to the receiving unit, where a similar bellows (actually calibrated with the first) motivates the recording pen.

The instrument is particularly adapted to industrial processes where ordinary connecting lines are subject to freezing (unless steam traced or jacketed), or to gas formation in liquid lines or condensation of liquid in gas lines; or where it is desired to exclude main-line high pressures or such gases as propane or butane from the control room.

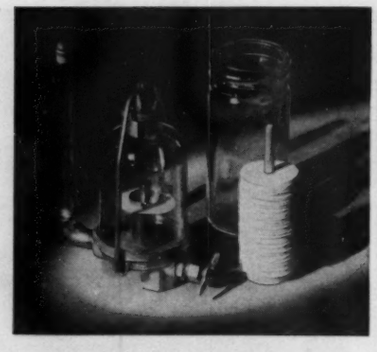
Copies of Bulletin E-22, which also includes detailed instructions on installation, operation and maintenance, may be procured from American Meter Co., Metric Metal Works, Erie, Pa., or from any of the company's factories or sales offices.

■ ■

Fraser & Norge to Exhibit Products at Golden Gate Fair

Fraser Furnace Co. of Stockton has recently been added to the list of participants in the cooperative exhibit of the Pacific Coast Gas Association at the Golden Gate International Exposition. Arrangements for the exhibit were made through the company's California distributors, the H. R. Basford Co. Featured in this exhibit will be the Fraser floor furnace.

The Norge Division of Borg-Warner Corp. through its California distributor Leo J. Meyberg Co., has also arranged to participate in the gas exhibit. The new C. P. Norge range will be feature.



Connelly Co. Announces New Hydrogen Sulfide Tester

A NEW device for testing gas for H_2S has been announced by Connelly Iron Sponge & Governor Co., 3154 S. California Ave., Chicago and 200 S. 2nd St., Elizabeth, N. J. Known as the Smyly H_2S Tester, this instrument uses specially prepared, dry paper test disks, pre-treated with the required amount of lead acetate. Extremely sensitive, these disks are said to react to one-fourth grain H_2S per 100 cu. ft. of gas in a one-minute test. Disks are furnished by the manufacturer on a spool, in air-tight glass container. They can be kept indefinitely.

Tests can be made in one minute. Disk is slipped into glass chamber and gas turned on. After test, disk is dated and filed for permanent record. This device is reported to be practical for installing at outlet of each purifying box at gas plant and in the superintendent's and manager's office.

An illustrated bulletin gives full details regarding this new H_2S tester. A free copy may be obtained by addressing the company or this magazine.

■ ■

Pittsburgh Equitable Offers Orifice Meter Handbook

Pittsburgh Equitable Meter Co., Pittsburgh, Pa., has announced the publication of a new orifice meter handbook entitled, *The Orifice Meter*. This book, written by Allen D. MacLean, chief engineer of the company, contains information relating to orifice meter measurement. Included in the 10 chapters of this 150-page pocket size handbook, with numerous illustrations, diagrams and charts, is a complete story on measurement by orifice. The theory and mathematics necessary to better understand the principles involved, together with equations and tables to accomplish the measurement of any normal gas or liquid, are included. Copies of the orifice meter handbook may be secured at $2.00 each by writing the Pittsburgh Equitable Meter Co., 400 N. Lexington Ave., Pittsburgh, Pa.

■ ■

Okla. Gas Accountants Meet

The Natural Gas Accountants Association of Oklahoma met at Oklahoma City, December 16 with about 35 in attendance. Papers presented were "Government Reports" by R. C. Heard of Southwest Natural Gas Co., Ada, and "Current Utility Accounting Problems" by Harold F. Taylor, Oklahoma Natural Gas Co., Tulsa. The next meeting of the association will be held at Tulsa, Feb. 24.

GEORGE A. BURRELL

Petroleum and Gas Engineer

Design—Construction—Reports

■

Suite 2900
50 Broadway
New York City

1936-42 5th Avenue
Pittsburgh, Pa.

HEATS • VENTILATES • FILTERS • CIRCULATES • HUMIDIFIES

Race Gas FURNACES AIR CONDITIONERS

SIZES: 45,000 to 630,000 B.t.u. Input

Enter the air conditioning race with RACE. Increased customer good-will, minimum service requirements and profits the year round will make YOU —THE WINNER!

DISTRIBUTORS—DEALERS. Wire or Write for Territories, Discounts, Details.

ROYAL AIR CONDITIONING EQUIPMENT CO.
1900 N. ALAMEDA BLVD. COMPTON, CALIFORNIA

Homestead "Woodfires" and "Coalfires"

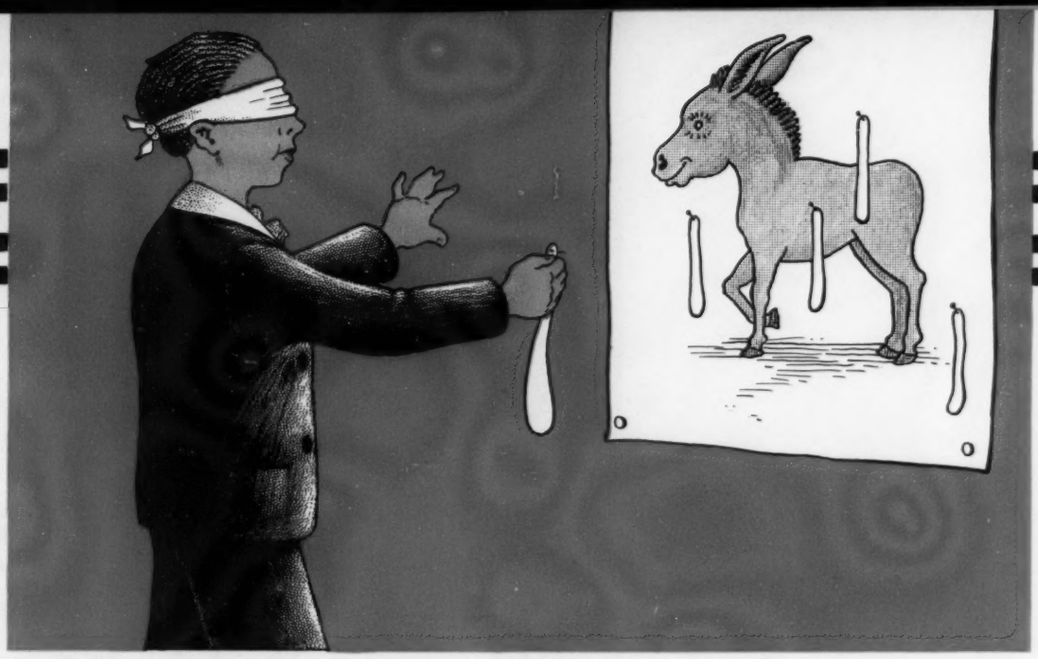
are the most interesting type of Gas Fireplace Heaters to your customers.

They are Fires for Fireplaces—not just heating stoves.

Model pictured is the No. 08 Oak Woodfire used with the customer's Andirons and Fireplace Equipment.

THERE IS ALWAYS SPRING BUSINESS AVAILABLE

Homestead Heater Co., Inc.
Selvage St. Newark, N. J.

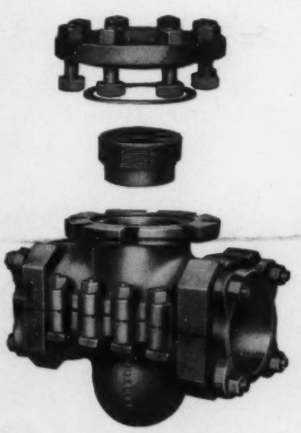


ANYWHERE

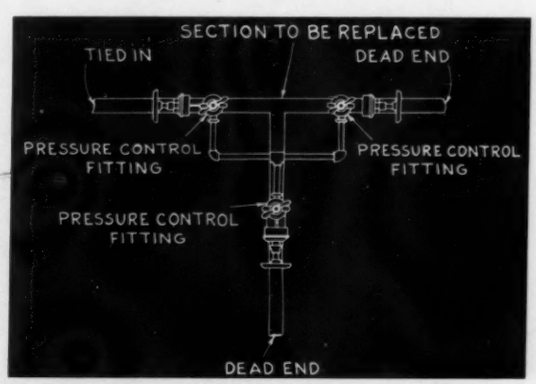
With Mueller Pressure Control Fittings and Equipment, it is possible to go to the exact location desired and isolate a section of the distribution system and make extensions, repairs, tie-ins etc., without the inconvenience of locating the nearest valve, shutting down the line, or interrupting service. The use of this equipment assures a positive shut-off ANYWHERE. Welding operations may be carried on with absolute safety, fittings need not be installed until the occasion arises, and then at the exact location desired. The cost is less than that of any type valve installed.

If you are not already acquainted with how this equipment will show definite savings in installation and maintenance expense, write us today for full information.

MUELLER CO., DECATUR, ILL.



H-10424 Mechanical Joint Type.



Typical installation of Mueller Pressure Control Fittings.

Weld Type Fittings on pipe with Drilling Machine attached.

MUELLER

GAS SERVICE EQUIPMENT

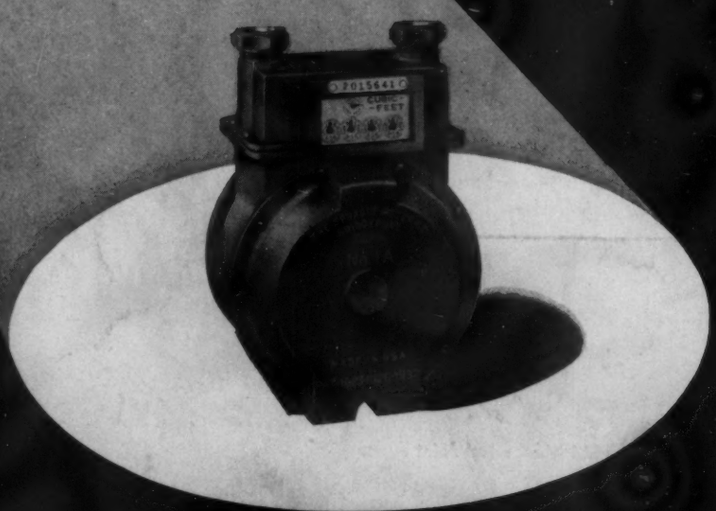
ACCURACY

DEPENDABILITY

INTERCHANGEABILITY

DURABILITY

LOW
MAINTENANCE



HOLLYWOOD GOES SPRAGUE!

Don't fail to see M.G.M's

"DRAMATIC SCHOOL"

Starring Luise Rainer and showing
the manufacture of

SPRAGUE METERS

THE SPRAGUE METER CO. BRIDGEPORT, CONN.